OM nucleic - nucleic search, using sw model

October 22, 2003, 17:13:34 ; Search time 7709 Seconds (without alignments)
11414.789 Million cell updates/sec

Run on:

score: Title: Perfect

US-09-601-168B-1 2151 1 tgcgttgggtgcggcctggc......gttttgccagaaaaaaaa 2151

Sequence:

IDENTITY NUC Gapop 10.0 , Gapext 1.0 Scoring table:

5777422 Total number of hits satisfying chosen parameters:

2888711 seqs, 20454813386 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

gb_ph **
gb_pl: *
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No. is the number of results predicted by chance to have a Pred.

score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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ALIGNMENTS

PAT 07-SEP-2000

linear

Arenzana, S.F., Concordet, J.P., Kroll, M., Durand, H., Benarous, R. and DNA Sequence 1 from Patent W09938969. AX019507 AX019507.1 GI:10043427 artificial sequences. synthetic construct synthetic construct RESULT 1
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LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL

Argottin, Pargottin, Protein humaine beta _trcp Protein humaine beta _trcp Patent: WO 9938969-**K1 05-AUG-1999**;

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NAT SANTE RECH MED (FR); KROLL MATHIAS (FR); DURAND HERVE (FR);
BENAROUS RICHARD (FR); MARGOTTIN FLORENCE (FR); PASTEUR INSTITUT
(FR)
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TITLE Human beta TrCP protein and a protein and a patent: JP 2002501746-ANA 2202; JOURNAL PARENTE TO PROTEIN AND AND AND AND AND ARTITUT NATIONAL DE LAYSENTE ET DE LA RECHERCHE MEDICALE, INSTITUT COMMENT OS Artificial Sequence PN 37-20A-1999 FR 98/01100, 09-DEC-1998 FR 98/15545 PI PR 23-JAN-1999 FR 98/01100, 09-DEC-1998 FR 98/15545 PI RICHARD BERNAROUS: FLORENCE MARGOTTIN, HERVE DURAND, PI FERNANDO ARENZADA SERSEDSOS, AMITHAS KROLL, JEAN PAUL CONCORDET PC CALDAN-1998 FR 98/01100, 09-DEC-1998 FR 98/15545 PI RICHARD BERNAROUS: FLORENCE MARGOTTIN, HERVE DURAND, PI FERNANDO ARENZADA SERSEDSOS, AMITHAS KROLL, JEAN PAUL CONCORDET PC CALDAN-1998 FR 98/01100, A61P31/12, PC AG1P35/00, A01K67/027, A61R38/00, A61P31/12, PC AG1P35/00, A01K67/027, A61R38/00, A61P31/12, PC AG1P35/00, A01K67/027, A61R38/00, A61P31/12, PC AG1P35/00, AG1R37/02, C12NS/00 CC AG1P37/00, AG1R37/02, C12NS/00 CC Description of the artificial sequence : CC Drotein CT C C Drotein CT C C Drotein CT C C C C C C C C C C C C C C C C C C	Query Match Query Match Best Local Similarity 100.0%; Pred. No. 0; Matches 2151; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	0y 1 TGCGTTGCGCCTGGCACCTGAAAGGGGCGGCCCCGGCGGAAAGGGCACCCAGTGGCC 60	0y 61 TCGGCGATTATGGACCCGGCCGGGGGGGGGGGCGCAGAGAGGAGGCACTCAAGTTATGAAT 120	OY 121 TCCTCAGAGAGAGACTGTAATAATGGCGAACCCCCTAGGAGAGATAATACCAGAGAAG 180 Db 121 TCCTCAGAGAGAGAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATACCAGAGAG 180	Oy 181 AATTCACTTAGACAGACATACAGCTGTGCCAGACTCTGCTTAAACCAGAAACAGTA 240	OY 241 TGTTTAGCAAGCACTGCTATGAAGACTGAGAATTGTGTGGCCAAAACAAAACTTGCCAAT 300 Db 241 TGTTTAGCAACTGCTATGAAGACTGAGAATTGTGTGGCCCAAAACAAAACTTGCCAAT 300	OY 301 GGCACTTCCAGTATGATGTGCCCAAGCAACTGAACTCTCAGCAAGCTATGAAAAGGAA 360	oy 361 AAGGAACTGTGTGTAATACTTTGAGCAGTGGTCAGATCAGTGGAATTTGTG 420 bb 361 AAGGAACTGTGTGTAATACTTTGAGCAGTGGATCAGATCAGTGGAATTTGTG 420 cy 421 GAACATCTTATATCCCAAATGTGTCATTACCAACTGGGCACATAAACTGGTTTAAA 480 l
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WRFPDGWAPPNSFYRALYPKIIGDIETIESNWRCGHHSLORTHCRSFTSKGYYCLQYD
DQKIVSGLRDWIIKIWDKWTLECKRILTGHTGSVLCLQYDERVIITGSSDSTVRYWDV
NYGBWLWTLIHLERSYLLHKERWGMWYTCSKORSIAWDMASPTDITLRRULVGHRAA
VNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVVSGSSDN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INSERM - I.C.G.M., Laboratoire 24 rue de Fg.St-Jacques, 75014
                                                                                                                                       1921 TGAGACTCCTGTTGGGACACAGTTGGTCTGCAGTCGGCCCAGGACGGTCTACTCAGCACA 1980
                                                                                                                                                                                                                                                            ACTGACTGCTTCAGTGCTGCTATCAGAAGATGTCTTCTATCAATTGTGAATGATTGGAAC 2040
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Margottin,F., Bour,S.P., Durand,H., Selig,L., Benichou,S.,
Richard,V., Thomas,D., Strebel,K. and Benarous,R.
A novel human WD protein, h-beta TrCp, that interacts with HIV-1
Vpu connects CD4 to the ER degradation pathway through an F-box
                                AACAACAGTAACAATCAAACTACTGCCCAGTTTCCCTGGACTAGCCGAGGAGCAGGGCTT
                                                                                                                                                                                                           ACTGACTGCTTCAGTGCTGCTATCAGAAGATGTCTTCTATCAATTGTGAATGATTGGAAC
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beta-transducin repeats; beta-TRCP gene; WD repeat.
Homo sapiens (human)
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/mol_type="mRRA"
db xref="taxon:966"
cell_line="Jurkat T-cell"
/cell_type="T lymphocyte"
/issue type="lymphoid"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (03-JUL-1997) R. Benarous,
Interactions Proteiques, CHU Cochin,
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KEYWORDS
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TITLE
JOURNAL
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Contact: MGC help desk K

Contact: MGC help desk K

Contact: MGC help desk K

Email: cgapbs-remail.nih.gov

Issue Procurement: Life Technologies, Inc.

Tissue Procurement: Life Technologies, Inc.

Tissue Procurement: Life Technologies, Inc.

Tissue Procurement: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G. Consortium (LLNL)

DNA Sequencing Dy: National Institutes of Health Intramural

Sequencing Center (NISC),

Gaithersburg, Maryland;

Web site: http://www.nisc.nih.gov/

Contact: nisc.mgcampfarl.nih.gov/

Contact: nisc.mgcampfarl.nih.gov/

Contact: nisc.mgcampfarl.nih.gov/

Akhter.N., Ayele.K., Beckstrom-Sternberg,S.M., Benjamin,B.,

Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,

Dietrich,N.L., Granite,S., Guan,K., Gupta.J., Hagnighi,P.,

Hansen,N., Ho.S.-L., Karlins,E., Laric,P., Legaspi,R., Maduro,O.L.,

Maskerl,B., Maskeri,B., Mastrian,S.D., McCloskey,J.C., McDowell,J.,

Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W., Tsurgeon,C.,

Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L., Young,A.,
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/protein_id="MAP27994.1"
/db_xref==GI:20180346"
/translation="MDPAEAVLQEKALKFWCSMPRSLWLGCSSLADSMPSLRCLYNPG
                                                                                                                                                                                                                                                BC027994

Homo sapiens, beta-transducin repeat containing, clone MGC:40028

MAGE:5180993, mRNA, complete cds.
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This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 4502476.

1. .2308
                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Buteleostomi;
Catarrhini; Hominidae; Homo.
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Submitted (08-APR-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
USA
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/db_xref="locuses"
/db_xref="locuses"
/db xref="laxon:9606"
/clone="MGC:40028 IMAGE:5180993"
/tissue type="Brain, Lung, Testis, adult, pooled whole"
/clone_lib="NHIMGC_115"
/lab hoste:"DHIMB"
/note="Vector: pCMV-SPORT6"
TITIBARCCICCCCTCCTCTCCTCCTTTCACCTCTGCACCTAGTITITTCCCATTGGTTC
                                                       TITIAAACCICCCCICCICCICCTICCTCCICCICICCCIAGITITITCCCATIGGITC
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Mammalia; Eutheria;
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BASE COUNT ORIGIN	Query Match Best Local Matches 2034	Oy 1	QY 1	Oy 2.	Qy 2	Oy 3	Qy 4	Qy 4 Ob 5	Qy s	δ. 25 26 29	9 YO 40	7 7 da	Oy 7	λ Σ Σ δ	

TTCAATAATGGCATGATGGTGACCTGCTCCCAAGGTCGTTCCATTGCTGTATGGGGATATG GCTCCCCAACTGACATTACCCTCCGGAGGGTGCTGGTCGGACACCGAGCTGCTGTCAAT TGTTTGCAGTACAGGGACAGGCTAGTAGTGAGTGGCTCATCTGACAACACTATCAGATTA TGTATTCGATTTGATAACAAGAGATAGTCAGTGGGGCCTATGATGGAAAAATTAAAGTG TGGGATCTTGTGGCTGCTTTGGACCCCCGTGCTCCTGCAGGGACACTCTGTCTACGGACCTGCTGTGTGTTTGTGGCTGCTTGTTGGACCCCGTGCTGCAGGGACACTCTGTGTGTACGGACC AGGATGAGCAACAACAACAATCAAAACTACTGCCCAGTTTCCCTGGACTAGCCGAGGA TGGGACATAGAATGTGGTGCATGTTTACGAGTGTTAGAAGGCCATGAGGAATTGGTGCGT TGTTTGCAGTACAGGGACAGGCTGGTAGTGAGTGGCTCATCTGACAACACTATCAGATTA TGGGACATAGAATGTGGTGCATGTTTACGAGTGTTAGAAGGCCCATGAGGAATTGGTGCGT AGGATGAGCAACAACAGTAACAATCAAACTACTGCCCAGTTTCCCTGGACTAGCCGAGGA

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	RESULT 7 AF081887 LOCUS LOCUS DEFINITION Must musculus ubiquitin ligase FWD1 mRNA, complete cds. ACCESSION VERSION AF081887.1 GI:4336326 KEYWORDS SOURCE SOURCEMANISM Must musculus (house mouse)	Euke Mamm 1 1 Hate Hatt and Ubis	MEDLINE 99199275 PUBMED 10097128 REFERRNCE 2 (bases 1 to 2175) AUTHORS Hatakeyama, S. and Nakayama, Ki. TILLE Direct Submitted (04-AUG-1998) Department of Molecular and Cellular Biology, Medical Institute of Bioregulation, Kyushu University,	FEATURES J. Macushi Alganizar, Fuature old 1932, Ogyani Location/Qualifiers Source 1. 2175 / Organism="Musmaculus" / mol_type="mRNA" / db xref="mRNA" / db xref="mRNA" / db xref="similar to beta-transducin repeat-containing protein Trep: F-box protein: contains W140 repeats"	/codon_start=1 /produce="ubiquitin ligase FWD1" /produce="ubiquitin ligase FWD1" /protein_id="AAD17755_1" /db_xxef="di:4336327" /db_xxef="di:4336327" /translation="mbpABAV1QEKALKFWNSSEREDCNNGEPPRKIIPEKNSLRQTY NSCARLCINOFTVCITSTAMMTENCVAKAKLANGTSSMIVPRORKLSASTERECLTV KYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENI LSYLDARGLQABLLYCKEWYRYTSDGHLWKRALLANGTNSEMRGHAGYTLER NKPPDBNAPPNSFYRALIYPHT IQDIETIESWNRCRHSLQRIHCRSETSRGYCLQYD DQKIVSGLRDNTIKINDKSTLECKRILITGHTGSVLCLQYDBRVIITGSSDSTVRVWDV NAGEMLATLIHHCRATLERIKYMNNSTYCSRSIAVWDVARAPPTIRRRULVSGSDST VNVVDFDDKYLYUSASGDPRIFKWNNSTYCERYRLANGHKRGIATRRRULVSGSSDN TIRLWDIECGACLRVLEGGHEBLURCIRFDNRRIVSGSKYWNDAMDALDPRARAG	TLCLRILVEHSGRVFRLGRDEFQIVSSSHDDTILIMDFLNDPAAHAEPPRSPSRTYTY BASE COUNT 589 a 528 c 567 g 491 t ORIGIN Query Match 78.2%; Score 1682.2; DB 10; Length 2175; Best Local Similarity 88.5%; Pred No. 0.	Matches 1909, Conservative 0; Mismatches 228; Indels 20; Gaps 7; QY 1 TGCGTTGGCTGGCCTGGCACCAAAGGGCGGCCCCGGGGGGCGGACCCAGTGCC 60 Db 22 TGCGTTGGCTGCGCCTGGCACGAAAGGGCGCCCCGGGGAGCCAGTAGTC 81 QY 61 TCGGCGATTATGGACCCGGCGGCGGGGGGCGCGCGCGCGAAGGCACTCAAGTTTATGAAT 120 Db 82 CGGGCGATTATGGACCCGGCGGCGGCGGCGCTGCAAGAAGCGCTTAAGATTATGAAT 141 OY 121 TCCTCAGAGAGAGAGACTGTAATAATGAACCCCTAAGGAAAGCCTTAAGAATATACCAGAGAAG 180

1 (bases 1 to 1818)
Yaron, A., Hatzubai, A., Davis, M., Lavon, I., Amit, S., Manning, A.M., Andersen, J.S., Mann, M., Mercurio, F. and Ben-Neriah, Y. Identification of the receptor component of the NappasBalpha-ubiquitin ligase
Nature 396 (6711), 590-594 (1998)

Eutheria, Primates, Catarrhini, Hominidae, Homo

Mammalia;

Mercurio, F., Mannig, A.M., Andersen, J.S.,

Hebrew University-Hadassah

Submitted (27-0CT-1998) Immunology, Medical School, Jerusalem, Israel Location/Qualifiers

2 (bases 1 to 1818)
Yaron,A., Hatzubai,A., Merc
Mann,N. and Ben-Netiah,Y.
Direct Submission
Submitted (27-OCT-1998) Imm

985338

1. .1818 /organism="Homo sapiens" /mol_type="mRNA" /db_xref="taxon:9606"

<1. ... 1818 /note="beta-transducin

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TSDOMLWKGLIFENYRTDELWRGALERREGGYRFKYREPDGNAFENSFYRALFFRII
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CKRILTGHTGSVLCLQYDERVIITGRSUGGRACHWOWDPDGRACHRUFFN
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VRCIRFDNRIIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEF
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21-JAN-1999 cds.

By mRNA linear PRI E3RS-IkappaB mRNA, partial c

1819 Homo sapiens b-TRCP variant E AF101784

AF101784.1 GI:4165135 Homo sapiens (human)

RESULT 8
AF101784
LOCUS
DEFINITION
ACCESSION
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VERSION
CEYWORDS
SOURCE
ORGANISM

Homo sapiens Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,

1612 CTTGTGGAGCATTCCGGAAGATTTTTCGACTACAGTTTGATGAATTCCAGATTGTCAGT 1671 1	BC003989 ON Mus musculus beta-transducin repeat containing protein, mRNA (cDNA clone MGC:7517 IMAGE:3491843), complete cds. BC003989. GI:13278339 MCC. BC003989. GI:13278339 MCS. MUS musculus (house mouse) MUS musculus (house mouse) SM subscripts, Metazoa, Chordata, Craniata, Vertebrata; Buteleostomi; Musmanalia; Butheria; Rodentia; Sciurognathi; Muridae, Murinae, Mus. Eukaryota; Metazoa, Chordata, Craniata; Vertebrata; Buteleostomi; Mammalia; Luteria; Rodentia; Sciurognathi; Muridae, Murinae, Mus. El (base; Ito 2081) Stausberg, R.D., Faingold, E.A., Grouse, L.H., Derge, J.G., Rlausner, R.D., Collins, P.S., Wagner, L., Schaefer, C.F., Bhar, N.K., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhar, N.K., Diacchenko, L., Marusina, K., Parmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdán, T.B., Toshiyuki, S., Carninci, P., Parnge, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McBwan, P.J.,	MORIEGY, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulby, S.W., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shewchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Wyers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, D., Smailus, D.E., Generation and inlital analysis of more than 15,000 full-length human and mouse conv. Section, J.E., Jones, S.J. and Marra, M.A., Generation and inlital analysis of force than 15,000 full-length human and mouse conv. Section, J.E., A. 99 (26), 16899-16903 (2002) 22886257 and mouse conv. Section of Sci. U.S.A. 99 (26), 16899-16903 (2002) 22886257 and mouse conv. Section (MGC), Cancer Genomics Office, National Cancer Submitted (28-FEB-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, NIH-MGC Project URL: http://mgc.nci.nih.gov Contact: MGC help desk Email: cgapbs-r@mail.mih.gov Tissue Procurement: Gilbert Smith, Ph.D. cDNA Library Preparation: Life Pechnologies, Inc. cDNA Library Preparation: Life Pechnologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Conscrtium (LINL) DNA Sequencing Scupa at the Stanford Human Geneter, Stanford University School of Medicine, Stanford, CA, and Myers, R. M.	Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLML at: http://image.llnl.gov Series: IRAK Plate: 8 Row: o Column: 21 This clone was selected for full length sequencing because it
666666	RESULT 9 BC003989 LOCUS DEFINITION ACCESSION VERSION KEYNES SOURCE ORGANISM REFERENCE AUTHORS	TITLE JOURNAL MEDLINE PUBMED REFERBNCE AUTHORS TITLE JOURNAL REMARK COMMENT	
		AATACAGGTGAAATGCTGAACACGTTGATTCACCATTGTGAAGAGTTCTGCACTTGCGT AATACAGGTGAAATGCTGAACACGGTTGATTCACCATTGTGAAGAGGTTCTGCACTTGCGT AATACAGGTGAAATGCTGAACACGGTTGATTCACCATTGTGAAGCAGTTCTGCGTTGTTGTTGTTGTTTTTGCGTTTTTTTT	1552 IGGGATCTIGIGGCTGCTTTGGACCCCCGTGCTCCTGCAGGGACACTCTGTCTACGGACC 1611

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ATGCTGCAGAGGGATTTCATAACTGCACTGCCAGCACGGGGTCTGGACCACATCGCTGAG
                               AACATTCTGTCATACCTGGATGCCAAATCACTATGTGCTGCTGAACTTGTGTGCAAGGAA
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TIRLMDIBGCGACLRVLGGEBELVRCIRFDNKRIVSGASSDN

TLCLRTLVBHSGRVFRLQPPDFRPDTLLIMDFLNDPAAHAEPFRSPSRTYTY
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                                                                                              db_xref="taxon:10090"
/db_xref="taxon:10090"
/clone="WGC:7517 IMAGB:3491843"
/clone="WGC:7517 IMAGB:3491843"
arose Eyportameously from a senesacatized to lung. Tu arose spontaneously from a senescent normal mammary (clonal) outgrowth infected with the virus MMTV."
/clone=lib="NCI CGAP_LU29"
/lab_host="Nel10B"
/note="vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 10; Length 2081;
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 following selection criteria: matched mRNA
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Pred. No. 0;
0; Mismatches 221; Indels
                                                                                                                                                                                                                                                 /gene="Btrc"
/note="synomys: PWD1, Slimb, b-TrCP,
/db_xref="LocusID:12234"
/db_xref="MGI:1338871"
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                                                  organism="Mus musculus"
                   Location/Qualifiers
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                                                                /mol_type="mRNA"
/strain="CZECH II"
/db xref="taxon:100
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88.5%;
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Best Local Similarity 88.5
Matches 1853; Conservative
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TIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGRYDGKIKVWDLMAALDPRAPAG
TLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAHAEPPRSPSRTYTY
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Pred. No. 0;
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NSCARLCINQETVCLTSTAMKTENCVAKAKLANGTSSMIVPKQRKLSASYEKBKELCV
KYPEQWSESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHITENI
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Mus musculus beta-transducin repeat-containing protein mRNA,
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Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.
(bases 1 to 1979)
Minston, J. Elledge, S.J. and Harper, J.W.
Direct Submission
Submitted (101-DEC-1998) Biochemistry, Baylor College of Medicine,
One Baylor Plaza, Houston, TX 77030, USA
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                                                                                                                                                                                                                                                                                                                                          TGCCCAGGACCCATTAAAGTTGCGGTATTTAACGTATCTGCCAATACCAGGATGAGCAAC
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db_xref="GI:5230822"
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/mol_type="mRNA"
/db_xref="taxon:10090"
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/note==beta-transducin repeat-containing protein; receptor component of IkBa-ubiquitin ligase"
/codon_start=1
/product==beta-TrCP protein E3RS-IkappaB"
/protein_id="ApD08701.1"
/brotein_id="ApD08701.1"
/db_xref="G1:4008020"
/translation="MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSIRQTY
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KYPEQWSSEDQVEEVEHLISQMCHYGHGHINSYLKPMLQRDFITALPARGLDHIAENI
LSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMVYTDSLWRGLABRERGMGQYLFK
NKPPDENAPDNSYTALLYPRALISQMCHYGHGHINSYLCHQYBORTALCKGTSTSKGYVCLQYD
DQXLVSGLRDAPDNSYTALLYPRIGGENCHLGKRITGGRGSIAWDMAASPTDITLRSVLVGHRAA
NWVDFDDKXIVSGLRAFLECKRILGGFTGRYCTLORGYRDRLWYGRSAD
TIRLWDIEGGACLRVLBGHEELVRCIRFUNKRIVSGAYDGKIKVWDLAALDPRAAAG
TICLRTLVWGRSCRCVFLLGFTGRYTLINDFLNDFAAHAEPPRAPAG
TICLRTLVWGRSCRCVFLQFTEFQIVSSSHDDTILINDFLNDFAAHAEPPRAPAG
TISR"
                                                            AF099932 1712 bp mRNA linear ROD 21-JAN-1999
Mus musculus beta-TrCP protein E3RS-1kappaB mRNA, complete cds.
AF099932
                                                                                                                                                                                                        Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus. I. (bases 1 to 112)
Yaron, A., Hatubai, A., Davis, M., Lavon, I., Amit, S., Manning, A.M., Andersen, J.S., Mann, M., Mercurio, F. and Ben-Neriah, Y. Identification of the receptor component of the Nature 396 (6711), 590-594 (1998)
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Direct Submission
Submitted (19-OCT-1998) Immunology, Hebrew Universeln Karem, Jerusalem 91120, Israel
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Pred. No. 0;
0; Mismatches 163; Indels
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Mus musculus
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NAGEMINTLIHHCEAVLHIRFNNGWWYTCSKDRSIAVWDWASPTDITLERVLVGHRAA VNVVDFDDKYIVSAGDRTIKVWNTSTCEPVRILNGHKRGIACLQYRDRLVVSGSSDN TIRLWDIECGACLRVLEGHEBLYRCIRFDNKRIVSGAYDGKIKVWDLMAALDPRAR-AG TLCLRTLVEHSGRVFRLQFDEFQIVSSCHDDTILIWDFLNDPAAHAEPPRSPSRTYTY ISR" BASE COUNT 469 a 399 c 453 g 389 t ORIGIN	Query Match Best Local Similarity 90.2%; Pred. No. 0; Matches 1543; Conservative 0; Mismatches 167; Indels 0; Gaps 0; Qy 70 ATGGACCCGGCCGACGGTGCTGCAAGAAGGCACTCAAGTTTATGAATTCCTCAGAG 129 Dh	130 AGAGAAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATACCAGAGAAGAATTCACTT 1 [130 AGAGAAGACTGTAATAATGGCGAACCCCTAGGAAGATAATACCAGAGAAGAATTCACTT 1 [11	OY 190 AGACAGACATACAACAGCTGTGCCAGACTCTGCTTAAACCAGAAAACAGTATGTTTAGCA 249 Db 121 AGACAGGCTTACAACAGCTGTGCCAGGCTTGCATAACCAAGAGGACAGTATGTCTAACA 180 OY 250 AGACTGCTATGAAGATTGTGTGGCGAAAACAAAACAAAA	Db 181 AGCACTGCTATGAAGACTGAAAATTGTGTGGCCAAAGCCAAACTTGCCAATGGCACTTCC 240 Qy 310 AGTATGTGCCCAAGCAACTGCTGCTCTCAGCAAGCTATGAAAAGGAAAAGGAACTG 369 Db 241 AGCATGTTGTGCCCAAGCAGGAAACTCTCAGCAAACTATGAAGAAAAAGGAAAAGGAGTG 300	Oy 370 IGIGICAAAIACTITGAGCAGTGGTCAGAGTGAGATCAAGTGGAATITGTGGAACATCTI 429 Db 301 IGIGICAAGTAITTTGAGCAGTGGTCAGAGTCAATCAAGTGGAATITGTAGAACACCTI 360	OY 430 ATATCCCAAATGTGTCATTACCAACATGGGCACATAAACTGTGTGTTG 489	Qy 490 CAGAGAGATITCATAACTGCTCTGCCAGCTCGGGGATTGGATATGGCTGAGAACATT 549 Db 421 CAGAGGGATTTCATAACTGCCAGCACGGGGTCTGGACCACATGGCTGAAAACATT 480	OY 550 CTGTCATACCTGGATGCCAAATCACTAGTGCTGCAACTTGTGTGCAAGGAATGGTAC 609 Db + 481 CTGTCATACTTGGACGCCAAGTCACTGTGTGCCTGAGCTGTGCAAGGAATGGTAC 540	QY 610 CGAGTGACCTCTGATGGCATGCTGTGGAAGGTTATCGAGAAATGGTCAGGACAGAT 669 bb 541 CGCGTGACGTCGGACGGCATGCTGGAAAAGCTCATCGAGAGGATGGTCAGGACGGAC	QY 670 TCTCTGTGGAGGCCTGGCAGAAGAGGATGGGGACAGTATTTATT	Oy 730 CCTCCTGACGGGAATGCTCCTCCAACTCTTTTTATAGAGCACTTTATCCTAAATTATA 789	Oy 790 CAAGACATIGAGACAATAGAATCTAATIGGAGATGTGGAAGATAGTTTACAGAGAATT 849 	Oy 850 CACTGCCGAAGTGAAACAAGCAAAGGAGTTTACTGTTTACAGTATGATGATCAGAAAATA 909	Oy 910 GTAAGCGGCCTTCGAGACAACAATCTAGGATAAAAACACATTGGAATGCAGG 969

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BTRCP2; F-box and WD-repeats protein beta-TRCP2 isoform
Homo sapiens (human)
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MVRTDSLWRGLABRRGGGYLFKNKPPDGKTPPNSFYRALYPKIIODIETIESNWRCG
RHGLARLARLARCKTVCLOYDDQKXTVSGAEDNITTAUDAGHTGSVL
CLQYDBRVIITGSSDSYRVRWDVNYDFBMLYLIHGEAULHLRFNNGWYTCSKDRSI
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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                                                      Koike,J., Sagara,N., Kirikoshi,H., Takagi,A., Miwa,T., Hirai,M. Katoh,M.
Molecular cloning and genomic structure of the betaTRCP2 gene or chromosome 5935.1
Biochem. Biophys. Res. Commun. 269 (1), 103-109 (2000)
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Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Komo, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes 6000me Res. 10 (10), 1617-1630 (2000)
BX398796 BX398796
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Mus musculus adult male olfactory brain cDNA, RIKEN full-length enriched library, clone:6430504E23 product:beta-transducin repeat
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High-efficiency full-length cDNA cloning
Hebb. Enzymol. 303, 19-44 (1999)
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Copyright (c) 1993 - 2003 Compugen Ltd.
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/tissue type="olfactory brain"
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/note="beta-transducin repeat containing protein
(WAD|WGI:1338671, GB|NM_009771, evidence: BLASTN, 100%,
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Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itch, M., Sumi, N., Ishii, Y., Nishi, K., Kitsunai, T., Tashiro, H., Itch, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, P., Matsunaco, H., Sakagudi, S., Ispagami, T., Kashiwagi, K., Pujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. sequencing pipeline with 384 multicapillary sequencer format 20530913
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Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKRN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (B-mail:genome-res@gsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The FANTOM Consortium and the RIKEN Genome Exploration Research Group Phases I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length CDNAs
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URL.http://fantom.gsc.riken.go.jp/.
Location/Qualifiers
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is,A., Yoshida,n., ....zaki,Y.
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Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.

Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999) 9279253 10349636

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cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to prepare mouse Lissues.

Please visit our web site for further details.

URL:http://fenome.gsc.riken.go.jp/
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Location/Qualifiers
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/organism="Mus musculus"

/mol_type="mms"

/mol_type="mms"

/strain="C57BL/6J"

/db_xref="FANTOM DB:D330027D11"

/db_xref="taxon:10090"

/clone="D330027D11"

/tissue type="heart"

/clone | lbb="RikEN full-length enriched mouse cDNA library"
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1. 4502

//note="beta-transducin repeat containing protein

(MSD|MGI:1338871, GB|NM_009771, evidence: BLASTN,

match=1502)"
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IVSRKREPEGANYQKEXDLCIKYFDQMSESDQVEFVEBLISRACHYQHGHINSYLKPDL
QRDFTTALPEQGLDHIABNILSYLDARSLCAAELVCKEWQRVISGGHINSYLKPDL
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ERVIYTGSSDSTVRVWDVNTGEVLNTLIHHNEAVLHLRFSNGLMYTCSKDRSIAVWDM
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IACLQYRDRLVYSGSSDNTTRLWDIECGACLRVLEGHEELVRCIRFDNKRIYGGAYDG
KIKWWDLQAALDPRAASTLCLRTLVBHSGRVFRLQFDEFQIISSSHDDTILIWDFLN
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F-BOX AND WD-REPEATS PROTEIN BETA-TRCP2) homolog [Homo
sapiens] (SWISSPROT|COUKB1, evidence: FASTY, 99.2%ID,
100%length, match=1587)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prepare mouse tissues.
Itsues were provided by Dr. John Todd (Dept. of Medical Genetics Tissues were provided by Dr. John Todd (Dept. of Medical Genetics Fitsues, MRC building Adenbrookes Hospital Cambridge) whose Trust, MRC building Adenbrookes Hospital Cambridge) whose Passistance we gratefully acknowledge.
Please visit our web site for further details.
URL:http://genome.gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/
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/clone_lib="NIKEN full-length enriched mouse cDNA library"
/dev_stage="3 days neonate"
169._1758
                                                                                                                                                                                                  Yokohama
                                                                                                                                                                                                                                                                                                                                                                        cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           417
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                                                Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN). Laboratory for Genome Exploration Research (Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokoham Xanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.go.jp, URL-http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         418 GFGGBACATCTTATATCCCGAAATGTGTCATTACCAACATGGGCACATAAACTCGTATCTT
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Pred. No. 4.3e-233;
0; Mismatches 377;
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/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Ttoh, M., Sumi, N., Ishi, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Samamoto, R., Matsunoto, H., Sakaguothi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Adachi, J., Alzawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hrameto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kuwai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, M., Murata, M., Nomura, M., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, R., Shinagawa, A., Shizaki, T., Sogabe, Y., Tagawa, A., Tarkahashi, F., Takaku, A., Shizaki, T., Takada, Y., Shizaki, T., Tomaru, A., Toya, T., Yasunishi, A., Tahaka, J., Takaku, A., Kanishi, A., Takaku, A., Kasunishi, A., Takaka, J., Takaku, A., Kasunishi, A., Takaka, J., Takaka, J., Takaka, J., Takaka, J., Takaka, J., Takaka, J., Takaku, A., Saito, A., Takaka, J., Taka
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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

Nature 420, 563-573 (2002)

6 (Dases I to 3824)
                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                               Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
9927923
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	TTION SINCE	more information about this cluster, see http://www.genoscope.cns.fr/ cgi-bin/cluster.cgiseq=CSOD1064CE0QD1ccluster=5556.f. Contact :	Sites of the pCMVSPORT 6 vector. Library was normalized. Under 251 a 227 c 206 g 281 t 23 others Local Similarity 98.5%; Score 698.6; DB 13; Length 988; Local Similarity 98.5%; Pred. No. 2.3e-183; 1428 ATTATGGGACATAGAATGTGGTGCATGTTTACGAGTGTTAGAAGGCCATGAGGAATTGGT 14 [116] [117]
478 AAACCTATGCTGCAGAGACTTTCATAACTGCTCTGCGAGCTTGGATCGTATC 537 463 AAGCCCATGTTGCAGAGACTTTATCACTGCTTTACCAGAGCAGAGCTTAGATCACTA 522 463 AAGCCCATGTTGCATACCTGGATGCTTTACCAGAGCAGGCTTAGATCACTA 522 538 GCTGAGAACATTCTGCATACCTGGATGCCTATGTGCTGTGCTGCTGTGTGC 597 538 GCAGAAACATTCTCTCTCTACCTGGATGCCAATCACTGTGTGCTGCTGTGTGTG	CCTAAAATTATACAAGACATTGAGACATTGAGATGTGGAAGACATAGT 837	CTTCAGC 1116 SGCCTCC 1197 SGCTTCT 1176 SGTTCT 1176 IGTAGTA 1236 IGTAGTA 1236 IGTAGTA 1236 IGTAGTA 1236 IGTAGTA 1317 IGTAGTA 1377 IGTAGTAG 1377 IGTAGTAG 1377 IGTAGTAG 1377	1378 CAGTACAGGAACAGGAAGAGTAGACTATCAGATTATGGAAC

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/clone="IMAGE:368812"
/tissue_type="retinoblastoma"
/tish_host="Thi0B (phage-resistant)"
/clone_lib="NIH_MGC 67"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.75 kb. Library constructed by Life
Technologies."
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UI-M-FYQ-cdq-K-22-0-UI.rl NIH_BMAP_FYO Mus musculus CDNA clone
UI-M-FXQ-cdq-K-22-0-UI.rl NIH_BMAP_FYO Mus musculus cDNA clone
UAGE: 6833135 5', mRNA sequence.
CB244526
CB244526.1 GI:28366170
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Pred. No. 4.9e-170;
0; Mismatches 9; Indels 4;
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sl Similarity 98.2%;
700; Conservative (
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                                                                                                                          GACCCTTGTGGAGCATTCCGGAAGAGTTTTTCGACTACAGTTTGATGAATTCCAGATTGT 1667
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CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
Plate: LLAM9617 row: f column: 13
High quality sequence stop: 655.

1. 709
                                           1548 AGIGIGGGAICTIGIGGCIGCTITGGACCCCCGIGCTCCTGCAGGGACACTCTACG
                                                                                                                                                                                                                                      CAGTAGTTCACATGATGACACAATCCTCACTTGGGACTTCCTAAATGATCAGCTGCCCA
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Homo sapiens"
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AUTHORS
TITLE
JOURNAL
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TCTGGGATAAAAACACATTGGAATGCAAGCGAATTCTCACAGGCCATACAGGTTCAGTCC 1000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCACTIGCGITICAATAATGGCATGATGGTGACCTGCTCCAAAGATCGTTCCATTGCTG 1180
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Bmail: cgapbs-r@mail.nih.gov
Irissue Procurement: Dr. James Lin, Univeristy of Iowa
cDNA Library preparation: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
cDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
cDNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661 TGTGGGATATGGCTTCCCCAACTGACATCACCCTCANGAGGGTGCTGGTGGGACACCCGAG 720
                                                                                                                                                                                                                                                                                                            TCTGGGATAAAAGCACACTGGAATGCAAGCGGATTCTCACGGGCCACACGGGCTCCGTCC 480
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                                                                          301 GATGTGGGCGACATAGTTTACAGAGATCCACTGCCGGAGTGAAGCAAGTAAAGGGGTTT 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
Mus musculus
Mus musculus
Bukaryora: Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Bukaryora: Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.
1 (hases 1 to 778)
11 (hases 1 to 778)
Nath-Mac http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished
                                                                                                                                                                       BQ444188 1778 bp mRNA linear EST 29-MAY.
UI-M-EXO-bxj-1-06-0-UI.rl NIH_BMAP_EXO Mus musculus cDNA clone
IMAGE:5709077 5', mRNA sequence.
                                                                                                                                        881 ACTGTTTACAGTATGATGATCAGAAAATAGTAAGCGGCCTTCGAGACAACAACAATCAAGA
                        GATGTGGAAGACATAGTTTACAGAGAATTCACTGCCGAAGTGAAACAAGCAAAGGAGTTT
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/clone="IMAGE:5709077"
/tissue_type="whole brain"
/dev_stage="embryo 15.5 dpc"
/lab_host="embryo 15.5 dpc"
/lab_host="Embryo (TI phage resistant)"
/clone_lib="NIH_BMAP_EX0"
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/strain="C57BL/6"
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/tissue type="whole brain"
/dev_stage="embryo 13.5,14.5,16.5,17.5dpc"
/lab.host="DH10B (TI phage resistant)"
/clone lib="NIH BRID (TI phage resistant)"
/clone lib="NIH BRID: Vector: pXx- Asc; Site_I: EcoR I;
Site_2: Not I; The library was constructed according
Bonaldo, Lemnon and Soares, Genome Research, 6:791-806,
1996. Denatured RNA was size fractionated on a 1% agarcse
gel: First strand cDNA synthesis was primed with oligo-dT
primer containing a Not I site. Double strand cDNA was
size selected according to mRNA size fraction, ligated
with EcoR I adaptor, digested with Not I and then cloned
directionally into pXx-Asc vector. The library tag
sequence located between the Not I site and the polyA tail
is AGCGAGAGG. This library was created for the University
lowa Brain Anatomy Project (BMAP): 'Gene Discovery in the
Developinm Mouse Nervous System', supported by National
Institute of Mental Health (NIMH), Hemin Chin, Ph.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
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                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
Email: cgapbs.remail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLML at:
This clone was contributed by the Brain Molecular Anatomy Project
(BMAP)
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   Mus musculus
Mus musculus
Mus musculus
Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Bukaryota; Metheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 776)
Musmalia; Entheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
Narh-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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/strain="C57BL/6"
/db_xref="taxon:10090"
/clone="IMAGE: 6833135"
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1 (bases 1 to 652)
1 losecker, H., Boecher, M., Brandt, P., Mewes, H.W., Gassenhuber, J. and Wiemann, S.
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6, 14059
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This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKEZ); Email s.wiemann@dKz- heidelberg.de).
sequenced by GBP (Mational Research Centre for Biotechnology ltd
Braunschweig/Germany) within the cDNA sequencing consortium of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAATTGGTGCGTTGTATTCGATTTGATAACAAGAGGATAGTCAGTGGGGCCTATGATGG
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/note="Vector: pSport1; Site_1: Not1; Site_2: Sal1"
166 c 138 g 183 t
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No sl sequence available.

This clone (DKF29434MIS28) is available at the RZPD in Please contact the RZPD: Ressourcenzentrum, Heubnerweg Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.

Location/Qualifiers
                                                                                652 bp mRNA linear DKFZp434M1528_r1 434 (synonym: htes3) Homo sapiens AL044095
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Pred. No. 9.3e-166;
0; Mismatches 3;
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/db_xref="taxon:9606"
/clone="DKF2p434M1528"
/tissue_type="testis"
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/lab_host="DH108"
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Unpublished
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ilarity 99.2%;
Conservative
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Homo sapiens
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/note="Organ: brain; Vector: pXX-Asc; Site_1: EcoR I; Site_2: Not I; The library was constructed according to Bonaldo, Lennon and Soares, Genome Research, 6:791-806, 1996. Denatured mRNa was size fractionated on a 1% agarose gal. First strand cDNA synthesis was primed with an oligo-dT primer containing a Not I site. Double stranded cDNA was size selected according to mRNA size fraction, ligated with EcoR I adaptor, digested with Not I, and then cloned directionally into pXX.Asc vector. The library tag sequence located between the Not I site and the polyA tail, is GTGCGTGAA. This library was created for the University of lowa Mouse Brain Molecular Anatomy Project (BMAP): 'Gene Discovery in the Developing Mouse Nervous System', supported by National Institutes of Mencal Health (NTMH), Health, Ph.D., program coordinator."
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/mol type="mRNA"
/db_xref="taxon:9606"
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Location/Qualifiers
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5', mRNA sequence.
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AGENCOURT 7907367 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:6154838
5', mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
Email: Cgapbs-remail.nh.gov
Tissue Procurement: ATCC
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: NGC clone distribution information can be found through the I.M.A.G.B. Consortium/LLNL at:
http://image.llnl.gov.icolumn: 15
                ATCTGCCAATACCAGGATGAGCAACAGTAACAATCAAACTACTGCCCAGTTTCCCTG
                                          359 Archeccaaraccaedardaecaacaacaacaarcaarcaacracreccaerricecre
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Location/Qualifiers
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/oxganism="Homo sapiens"
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Best Local Similarity 99.13
Matches 639; Conservative
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973 bp mRNA linear EST 05-PEB-2002
_6427660 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5502075
267 CCAGAGAAGAATTCACTTAGACAGACATACAACAGCTGTGCCAGACTCTGCTTAAACCAA 326
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                                                                                                                             CTTGCCAATGGCACTTCCAGTATGATTGTGCCCAAGCAACGGAACTCTCAGCAAGCTAT 446
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(Dases 1 to 973)

NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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CDNA Library Arrayed by: The I.M. A.G.B. Conscortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can littp://inracghthe I.M.A.G.B. Consortium/LLNL at:
http://inracglinl.gov. k column: 04
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28.9%;
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Best Local Similarity 98.73
Matches 627; Conservative
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/note="Organ: eye, Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sal1; Cloned unidirectionally. Primer: Oligo Average insert size 1.75 kb. Library constructed by Technologies."
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/organism="Homo sapiens"
/mol type="mRNA"
/mol type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:561709"
/tissue type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
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Homo sapiens

Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,

Mammalia, Euheria, Primates, Catarrhini, Hominidae, Homo.

(bases 1 to 887)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished
                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tissue Procurement: ATC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be
found through Lhe I.M.A.G.E. Consortium/LLNL at:

http://image.llh.gov
Plate: LLAM14056 row: j column: 14

High quality sequence stop: 630.

Location/Qualifiers
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Pred. No. 4.7e-162;
0; Mismatches 8;
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                             61 GANCGCCAAGTCACTGTGTGCTGCTGTGTGCAAGGAATGGTACCGCGTGACGTC 120
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Mammalia; Eutheria; Primates; Catarrhini, Hominidae, Homo.
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC Clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov
                                                                                                                      481 GGGCCACACGGGCTCCGTCTGTGTTCTGCAGTACGATGAGAGGGTGATCATCACAGGCTC
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561 GGATGCCAAATCACTATGTGCTGCTGAACTTGTGTGCAAGGAATGGTACCGAGTGACCTC
                                                                                              TGATGGCATGCTGTGGAAGAAGCTTATCGAGAATGGTCAGGACAGATTCTCTGTGGAG
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
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Tissue Procurement: ATCC
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/clone="IMAGE: 6841315"
/tissue_type="Whole brain"
/dev stage="Whole brain"
/dev stage="Whole brain"
/dev stage="In 1 phage resistant"
/lab_host="DH10B (TI phage resistant)"
/clone_lib="While MAP_QH0"
/note="Organ: Brain; Vector: pyx- Asc; Site_1: EcoR I;
/clone] brain; Vector: pyx- Asc; Site_1: EcoR I;
/site_2: Not I; The library was constructed according
Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
1996. Denatured RNA was size fractionated on a 1% agarose
gel. First strand cDNA synthesis was primed with oligo-dT
primer containing a Not I site. Double strand cDNA was
size selected according to mRNA size fraction, ligated
with EcoR I adaptor, digested with NotI and then cloned
directionally into pyx-Asc vector. The library tag is cGAACTGAAT. This library was created for the University
Iowa Brain Anatomy Project (BMAP): 'Gene Discovery in the
Developing Mouse Bervous System', supported by National
Institute of Mental Health (NIMH), Hemin Chin, Ph.D.,
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CTCCCCTCCTCCTCCTTTCACCTCTCCACCTAGTTTTTTCCCATTGGTTCCAGACAAA 2108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Dr. Jim Lin, University of Iowa
Tissue Procurement: Dr. Jim Lin, University of Iowa
Tissue Procurement: Dr. Jim Lin,
Tissue Procurement: Dr. M. Bento Soares, University of Iowa
DNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: Distribution information can be found at
http://genome.uiowa.edu/distribution/mousefl.html
This clone was contributed by the Brain Molecular Anatomy Project
(BMAP)
                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 11. - Moses 1 to 744)
NIH - WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (WGC)
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Best Local Similarity 89.2%; Pred. No. 1.6e-160;
Matchés 664; Conservative 0; Mismatches 80;
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/organism="Mus musculus"
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184 c 202 q
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Location/Qualifiers
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/strain="C57BL/6"
                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
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CB520936.1 GI:29354291
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/organisme."Homo sapiens"

/mol Lype="mRNA"

/db Arefe"taxon: 9506"

/db Arefe"taxon: 9506"

/clone="IMAGE:3544549"

/tissue_type="Burkitt lymphoma"

/lab host="DH10B (phage-resistant)"

/clone=lib="NIH MGC 8"

/note="Organ: lymph; Vector: pOTB7; Site 1: XhoI; Site 2:

ECORI; CDNA made by Oligo-dT priming. Directionally

cloned into ECORI/XhoI sites using the following 5'
adaptor: GGCACGAG(G). Size-selected >50bp for average
insert size 1.8bb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-CDNA synthesis Xit

(Stratagene) and Superscript II RT (Life Technologies)."
                                                                                                 BE269297 601186356F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3544549 5',
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 692)
                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.

Email: Gapbs-remail.nih.gov

CDNA Library Preparation: Louis M. Staudt, M.D., Ph.D.

CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Prayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incytte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at: image.llnl.gov

Plate: LLCM23 grow: o column: 14

High quality sequence stop: 610.
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Pred. No. 2.3e-158;
0; Mismatches 12; Indels 3;
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ilarity 97.7%;
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/lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
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/lab_host="DH20B (phage-resistant)"
Site_1: Xho1; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/Xho1 sites using the followings insert size 1.8kb. Library constructed by inng Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Strategene) and Superscript II RT (Life Technologies)."
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         14
                                                                                            /organism="Homo sapiens"
Plate: LLCM202 row: C. High quality sequence stop: 617. Location/Qualifiers
                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:3530341"
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Search completed: October 22, 2003, 21:57:19 Job time : 4102 secs

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Human beta-TrCP co
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Beta-TRCP.N/SKP2.C
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/product= beta-TrcP
/note= "beta-transducin repeat containing protein"
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ABK6903
AAC9026
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ABK40680
ABA44075
AAK28263
AAK282821
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AAKS1717
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GAATGCAAAGCGAATTCTCACAGGCCATACAGGTTCAGTCCTCTGTCTCCAGTATGATGAG 1020
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                                                                                                                                                                                                                                                                                                                                                                           The present sequence encodes a human beta-transducin repeat containing protein (beca-Trcp). The protein directs proteins to the proteosome degradation pathways. The protein is able to interact with the Vpu protein of human immune deficiency virus-I (HIV-I), cellular proteins repeated the proteins of kapapabe or beta-catenin (bc) and/or protein Skplp. The protein controls ubiquitinylation of phosphorylated proteins and thus their targeting to proteosomes for degradation. Depending on whether the process is inhibited or promoted, the result may be delawded breakdown of CD4 (in cases of HIV-I infection); increased activity of IkB (and thus reduced activity of NFkappaB) and increased degradation of mutant bC in tumour cells, or increased Cs curvivyal (and reduced approteis) in Alzheimer's patients. The beca-TrcP protein, and its active peptide fragments, or its nucleic acid, are used to screen for anti HIV-I agents (antivirals), antichnour agents that distrupt cells order active peptide fragments, or its antimour agents that distrupt cells, and anti-inflammatory agents that distrupt cells, and anti-inflammatory agents that distrupt activation by NFkappaB. Fragments of the protein are also useful for treating osteo-articular inflammation or acute inflammation custing userial transmattion accided with release of tumour necrosis factor.

CUpdated on 20-MAR-2003 to correct PA field.)
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NAT SANTE & RECH MEDICALE
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99WO-FR00196
                                    98FR-0015545.
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Kroll M, Margottin F;
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29-JAN-1999;
                                    09-DEC-1998;
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This DNA encodes human beta-TrCP, an F-box/WD protein family member, which has been shown to have homology to human E3 ubiquitin ligase (E3). E3 enhances ubiquitination of phosphorylated I-kappa-B, an inhibitor protein of nuclear factor kappa-B (WF-kappa-B). Understanding I-kappa-B degradation via the ubiquitin pathway is useful for identifying addlaters of this process for use in treating diseases associated with activation of NF-kappa-B. In vitro analysis suggests that deletion of the F-box results in a protein that functions as a dominant negative molecule in vivo. Translant over-expression of delta-beta-TrCP (a deletion mutant) inhibited the degradation of endogenous I-kappa-B-alpha in stimulated Jurkat cells, resulting in accumulation of phosphorylated I-kappa-B-alpha-B. and beta-TrCP can be used to screen for modulate NF-kappa-B to treat inflammatory diseases, autoimmune diseases, cancer and viral infections.
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                                                                               Davis M,
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                                                                             Ben-eriah Y,
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                    (SIGN-) SIGNAL PHARM INC.
(YISS ) YISSUM RES & DEV CO.
                                                                           AM, Mercurio F,
Yaron A;
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Matches 2151; Conservative
                                                                                                                                       WPI; 2000-431294/37
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                                                                           Manning AM
Lavon I,
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                                                                                                                                                                                                               Nucleic acids encoding substrate-targeting subunits of ubiquitin ligases with F-box motifs (F-box proteins) are useful for diagnosis of proliferative and differentiated related disorders by measuring the FBP gene expression. Cells expressing such proteins or their fragments are useful for screening compounds. The compounds are agonists or antagonists, which are useful for treating a proliferative or differentiative disorder in a mammal such as breast, ovarian and prostate cancer and small cell lung carcinoma and also major opportunistic infections, immune disorders. Serious and an analogs, derivatives and their subsequences, anti-FBP protein, analogs, derivatives and their subsequences, anti-FBP antibodies are also useful in diagnosis of the disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%; Score 2151; DB 21; Length 2151; Best Local Similarity 100.0%; Pred. No. 0; Mismatches 2151; Conservative 0; Mismatches 0; Indels 0;
                                                                                Novel nucleic acid for screening compounds useful for treating proliferative and differentiative disorders such as cancer and disorders comprises sequences encoding ubiquitin ligases -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2151 BP; 628 A; 467 C; 513 G; 543 T; 0 other;
                                                                                                                                                                             Disclosure; Figure 3b, 3c, 3d; 245pp; English
                 2000-256635/22
                                       P-PSDB; AAY83041
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ligases) which can be used for the targetted degradation of a target polypeptide in vivo. Targetted degradation is achieved by expressing the target to the uniquitin ligase in a cell linked to the interaction domain of the target polypeptide and thereby recruiting the target polypeptide in creating the target polypeptide and thereby recruiting the target polypeptide increasing the level of a target polypeptide and for creating and expressing the level of a target polypeptide which is subjected to SCF mediated proteolysis. Degrading any desired protein in a cell is weful for preventing or treating diseases caused by the presence of abnormal amount of the specific polypeptides, for drug discovery and for gene therapy. Diseases treated include cancer, by degradation of concoproteins, Huntington's disease, other proliferative disorders and microbial infections. The method provides a quick and easy alternative to gene knockout technology. The target polypeptide can be degraded at all stages, or a specific stage, of development in the
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721 AAAAACAAACCTCCTGACGGGAATGCTCCTCCCCAACTTTTTATAGAGCACTTTATCCT 780 781 AAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGAGGCACTTTATCCT 780 781 AAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGATGTGGAAGACATAGTTTA 840 781 AAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGATGTGGAAGACATAGTTTA 840 841 CAGAGAATTCACTGCCGAAGTGAAACAAGCAAAGGAGTTTACTGTTTACAGTTGATTA 900 841 CAGAGAATTCACTGCCGAAGTGAAACAAGCAAGGAGTTTACTGTTTACAGTTGATGT 900 901 CAGAAAATAGTAAGTGAAGCAACACAATCAAGGATTACTGTTTACAGTTAAAAACACATTG 960 901 CAGAAAATAGTAAGGAGCCTTCGAGACAACACAATCAAGGATTACTGTTACAGTTATATGATTGAT	GAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGTTCTGCACTTGCGTTTCAATAT 114		GTGGCTGCTTTGGACCCCCGTGCTCCTGCAGGGACACTCTGTTGCGACCCTTGTGGAG GTGGCTGCTTTGGACCCCCGTGCTCCTGCAGGGACACTCTGTTGCGACCCTTGTGGAG GTGGCTGCTTTGGACCCCCGTGCTCCTGCAGGGACACTCTGTCGGACCCTTGTGGAG CAITCCGGAAGATTTTTCGACTACAGTTTGATGAATTCCAGATTGTCAGTAGTTCACAT GATGACACAATCCTCATCTGGGACTTCCTAAATGATCCAGATTGTCAGTAGTTCACAT GATGACACAATCCTCATCTGGGACTTCCTAAATGATCCAGATTGTCAGTAGTTCACAT GATGACACAATCCTCATCTGGGACTTCCTAAATGATCCAGCTGCCCCCCCC
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                                                                                                                                                                                                                                     Cytostatic; immunomodulator; cardiant; antiinflammatory; antimicrobial; proliferative; differentiative disorder; Skp2; F-box protein; cancer; ubiquitin ligase; breast cancer; prostate cancer; ovarian cancer; small cell lung carcinoma; immune disorder; parathyroid adenoma; FBP; inflammatory disorder; lymphoma; major opportunistic infection; certain cardiovascular disease; human; gene; ss.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Screening compounds for treating proliferative disorders, e.g. breast cancer or prostrate cancer, infections or immune disorders, comprises detecting a change in the activity of Skp2 with either p27 or Cks1
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1261 TITGAIGACAAGTACATIGITITCIGCAICIGGGGAIAGAACTATAAAGGIAIGGAACACA 1320
                                                        1321 AGTACTIGIGAATIIGTAAGGACCTIAAAIGGACACAAACGAGGCAIIGCCIGIIIIGC
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Novel complex of protein-protein interactions in adipocyte cells for identifying compounds that modulate the protein-protein interactions and useful for treating obesity and metabolic disorders

Claim 2; Page -; 125pp; English.

Jockers

28-DEC-2001; 2001WO-EP15423 02-JAN-2001; 2001US-259377P (HYBR-) HYBRIGENICS. (CNRS) CENT NAT RECH SCI Legrain P, Marullo S, WPI; 2002-583612/62. P-PSDB; ABG69473

WO200253726-A2 Homo sapiens

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The invention relates to a complex of protein-protein interactions (forming a protein-protein interaction map, PIM) in adjocyte cells as defined in the specification, or polymucleotides in adjocytes encoding for the polypeptides. Also included are a recombinant cell expressing the interacting polypeptides and a method of selecting a modulating compound and areporter gene the medium containing a modulating compound and a reporter gene the medium containing a modulating compound and a reporter gene the medium containing a modulating compound and a reporter gene the carnesformed with two vectors, where the first vector comprises a polynucleotide encoding a first hybrid polypeptide and DNA binding domain and the second vector comprising a polynucleotide encoding a geomy hybrid polypeptide and an activating domain that activates the second hybrid polypeptide and an activating domain that activates the corn reporter gene, when the first and second hybrid polypeptides interact and selecting the modulating compound which inhibits the system). The complexes are useful (i.e. using the yeast two-hybrid system). The complexes are useful for identifying compounds that modulate corn the protein protein interactions and useful for treating obesity and metabolic disorders e.g. non-insulin dependent diabetes mellitus, NIDDM. The compound isolated by the method is useful for treating and the proteins of the protein sequence encodes a member of the protein complex of the invention, used as the bait protein in the yeast two-hybrid assay.
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non-insulin diabetes mellitus, obesity; selected interacting domain,
SID; protein-protein interaction map, PIM; anorectic; metabolic disorder.
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T, Xu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 428; 648pp; English.
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ang J, Werhman T, X
Zhou P, Drmanac RT;
                                                                                                                        2000US-0488125.

2000US-0582317.

2000US-05820312.

2000US-0620312.

2000US-062191.

2000US-062191.

2000US-0623036.
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Best Local Similarity 99.6%;
Matches 2136; Conservative
                                                                                        2000WO-US34960
                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-488707/53.
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09-JUL-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
19-OCT-2000;
30-NOV-2000;
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The present sequence is a cDNA obtained from Incyte clone 3239149 of COLAUCTO1 library. It encodes cell signalling protein-12 (CSIGP-12). It is expressed in musculo-skeletal, gastrointesinal and nervous tissuess. Fragments of CSIGP encoding nucleic acid can be used as hybridisation probe for detecting CSIGP related sequences or allelic hybridisation probe for detecting CSIGP related sequences or allelic them with genetically engineered vectors. Agonists or antagonists can be used in the treatment of cell proliferative and inflammarory disorders associated with decreased or increased CSIGP expression. CSIGP is used in the diagnosis, prevention and treatment of cell proliferative disorders the diagnosis, prevention and treatment of cell proliferative disorders disorders like arteriosclerosis, cirrhosis, cancer, hepatitis and inflammatory disorders disorders like AIDS, Addison's disease, multiple sclerosis, etc.
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                                                                                                                                                                                                                 Yue H,
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                                                                                                                                                                                                              Lal P,
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99.7%;
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Best Local Similarity 99.73
Matches 2119; Conservative
                                                                                                                                                               (INCY-) INCYTE PHARM INC
                                                                                                                                                                                                            Hillman JL,
Yang J;
                                                                                                                                                                                                                                                                               WPI; 2000-086432/07
P-PSDB; AAY44249.
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  18-NOV-1999
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Baughn MR,
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          n R, Ma Y
Zhang J;
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for treating e.g. cancer and immune deficiency disorders
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      i V, Chen l
Yang Y, Zl
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      Asundi V,
      C, Asundi
Xue AJ,
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                                                                                                                                                                                                                                                                                                                      Claim 1; Page 274-275; 648pp; English
Boyle BJ, Tang YT, Liu
Wang J, Werhman T, Xu C,
Zhou P, Drmanac RT;
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   Ford, JE,
Ren F, Wa
Zhao QA,
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Best Local S
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production of other cytokines in other cell populations. The polymorlectides and polymeptides are useful in gene therapy, vaccines or peptide therapy. The polymeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haemacopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity is the construction of the construction of the construction of the construction of cancer, leukaemia, nervous system disorders, arthritis and treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                     inflammation.

Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666

AAN80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
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Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                          Sequence 3003 BP; 807 A; 703 C; 721 G; 772
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Best Local Similarity
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The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human, cytokine; cell proliferation; cell differentiation; gene therapy; vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthitis; inflammation; sa
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R, Wang
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human polynucleotide SEQ ID NO 2228
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2000US-0560875.
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2000US-0650325.
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30-NOV-2000;
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Zhao QA,
Xue AJ, 1
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                                                                                                                                                                                                  Human polynucleotide SEQ ID NO 2229.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human, cytokine, cell proliferation, cell differentiation, gene therapy, vaccine, peptide therapy, stem cell growth factor; haematopoiesis, tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis, inflammation; ss.
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Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
                                    TGATTGGAACTTTTAAAACCTCCCCTCCTCCTCCTTCTTCACCTCTGCACCTTTTTAAT
TGATTGGAACTTTTAAACCTCCCCTCCTCCTCCTTTCACCTCTGCACCTAGTTTTTTC
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Wang D, Wang J, Zhang J, Ren F, Chen R,
Yang Y, Wejhrman T, Goodrich R;
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Chen
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Wang D, Wang J, Zhang J, Ren F, C
Yang Y, Wejhrman T, Goodrich R;
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Pred. No. 0;
0; Mismatches
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                                 Human polynucleotide SEQ ID NO 2230
                                                                                                                                                                                                                                                                                                        03-FEB-2000; 2000US-0496914.
27-APR-2000; 2000US-0560875.
20-UUN-2000; 2000US-0590075.
19-JUL-2000; 2000US-0620325.
01-SEP-2000; 2000US-0654936.
15-SEP-2000; 2000US-0654936.
20-CCT-2000; 2000US-063325.
30-NOV-2000; 2000US-0728422.
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Best Local Similarity 99.6%;
Matches 2024; Conservative
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P-PSDB; AAM79568.
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Zhao QA,
Xue AJ,
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The present invention describes an F-box motif protein of ubiquitin ligase SCF complex which promotes the ubiquitination of IkappaB or beta-catenin and is constituted by Skpl protein, Cull protein and a complex (SCF complex) of F-box protein containing F-box motif and WD40 repeat motif and has the amino acid sequence of 45 residuaes (AAB12211) or one of two 569 residue sequences (AAB12812, which is mouse ubiquitin ligase FWD1 protein) and (AAB12813, which is human beta-transducin lepeat containing protein (beta-TrCP). The F-box protein can be used for the gene therapy of colon cancer by being recombined to a virus vector. The present sequence encodes the human beta-TrCP protein from the
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79.4%; Score 1707; D
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1707; Conservative 0; Mismatches
                                                                        (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                           Disclosure, Fig 17; 19pp; Japanese.
       98JP-0343437
                                    98JP-0343437
                                                                                                       WPI; 2000-485550/43.
P-PSDB; AAB12813.
                                                                                                                                                        F-box protein of ubiquitination of
                                                                                                                                                                                                                                                                                                                                                                                                                   present invention.
                                       02-DEC-1998;
     02-DEC-1998;
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1558 IGITIGCAGTACAGGGACAGGCTGGTAGTGAGTGGCTCATCTGACAACACTATCAGATTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITATGAATTCCTCAGAGAGAGAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATA
                                                                                                                                                                                                                                                         Human, cytokine, cell proliferation; cell differentiation; gene the vaccine; peptide therapy; stem cell growth factor; haematopoiesis; tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.
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Chen R, Wang ZW;
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larity 99.0%; Pred. No. 0;
Conservative 0; Mismatches
    TCTCGAACATACACCTACATCTCCAGA 1707
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                                                                                                                                                                                                                         Human polynucleotide SEQ ID NO 260.
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27-AFR-2000; 2000US-0560875.
20-UUN-2000; 2000US-0590075.
19-UUN-2000; 2000US-0620325.
01-SEP-2000; 2000US-0654936.
15-SEP-2000; 2000US-0663851.
20-CCT-2000; 2000US-0693325.
30-NOV-2000; 2000US-0693325.
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P-PSDB; AAM78582.
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Best Local Similarity
Matches 1708; Conserv
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172 CCAGAGAAGAATTCACTTAGACGACATACAACAGTGGCCAGACTCTGCTTAAACCAA 231	352 GAAAA 517 GAAAA 412 GAATT 577 GAATT	TATCTTAAACCTATGTGCAGAGATTTCATAACTGCTCTGCCAGCTCGGGGATTGGAT 53	592 592 757	652 AGAATGGTCAGGACAGATTCTCTGTGGAGAGGCCTGGCAGAAGGAAG	Z TATITATICAAAAACAAACCICCIGAGGGGAAIGTICCICCCAATICTITT [r 6	Oy 832 CATAGITTACAGAGAATTCACTGCCGAAGTGAAACAAGGAAGGAGTITACTGITTACAG 891 Db 997 CATAGITTACAGAGAATTCACTGCCGAAGTGAAACAAGGAAGGAAG	10	9	10	Oy 1072 AATACAGGTGAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGTTCTGCACTTGCGT 1131	Oy 1132 TTCAATAATGGCATGATGGTGACCTGCTCCAAAGATCGTTCCATTGCTGTATGGGATATG 1191 Db *1297 TTCAATAATGGCATGATGGTGACCTGCTCCAAAGATCGTTCCATTGCTGTATGGGATATG 1356	Oy 119% GCCTCCCCAACTGACATTACCCTCCGGAGGGGCTGGTCGACACCGAGCTGCTGTCGAT 1251

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1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
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Copyright (c) 1993 - 2003 Compugen Ltd.
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SUMMARIES		US-09-832-161-17	US-10-042-417-1	US-10-038-010-7	-09-832-1	US-10-023-530-1	15-09-764-848-15	-10-222-0	US-10-116-016-15	39-864-76	JS-09-864-761-19492	US-09-960-352-2934	-10-029-	-10-029-	-09-918-	-10-245-	US-10-245-618-7
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TCCTCAGAGAGAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATACCAGAGAG	AGCAAGCACTGCTATGAAGACTGAGAATTGTGTGGGCCAAAACAAGTAACT TCCAGTATGATTGTGCCCAAGCAACGAAACTCTCAGCAAGCTATGA [ICTGTCALATACTTTGAGGGTCAGAGTCAGATCAGTGGT NTATCCCAAATGTGCATTACCAACATGGGCACATAAACTCGT; ATATCCCAAATGTGTCATTACCAACATGGGCACATAAACTCGT; ATATCCAATGTGTCATTACCAACATGGGCACATAAACTCGT; CAGAGAGATTTCATAACTGCTCTGCCAGCTCGGGGATTGGATG	ATGTTGCAGAGAGA AACATTCTGTCATA AACATTCTGTCATA	601 GAATGGTACCGAGTGACCTCTGATGGCATGCTGTGGAAGAGCTTATCGAGAGAATGGTC 660	1 AAAACAACCTCCTGACGGAATGCTCCTCCCAACTTTTTATAGAGGACTTTATCCT 78	Caagacattgagacaatagaatctaattggagatgggagagc cactgccgaagtgaaacaagcaaggattactgtttacagt 	901 CAGNANTH	GAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGTTCTGCACTTGCGTTCTAATAI 114 GAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGTTCTGCACTTGCGTTTCAATAI 114 GAAATGCTAAACACGTTGATTCACCATTGTGAAGGTTCTGCACTTGCGTTTCAATAAT 114 GAAATGCTAAAACACGTTGAAACATCGTTCCATTGCTGTTGCGATTTGGCCTCCCCA 120

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Sequence 15, Application US/09764848

Sequence 15, Application US/09764848

Sequence 15, Application US/09764848

SEQUENCE OF TOWNERTION:

TITLE OF INVENTION: Wucleic Acids, Proteins, and Antibodies

FILE REFERENCE: PTZ08

CURRENT FILING DATE: 2001-01-17

Prior application data removed - consult PALM or file wrapper

WHMERS OF SEQ ID NOS: 53

SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 15

LENGTH 591
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larity 72.3%; Pred. No. 1.7e-128;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGAGATTTCATAACTGCTCTGCCAGCTCGGGGATTGGATCATATCGCTGAGAACATT 549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGTCATACCTGGATGCCAAATCACTATGTGCTGCTGAACTTGTGTGCAAGGAATGGTAC 540
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 AGAGAAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATACCAGAGAAGAATTCACTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTATGATTGTGCCCCAAGCAACGGAAACTCTCAGCAAGCTATGAAAAGGAAAAGGAACTG 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 AGTATGATTGTGCCCAAGCAACGGAAACTCTCAGCAAGCTATGAAAAGGAAAAGGAACTG 300
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  09
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                                                                                                                                                                                                          APPLICANT: LEGARAIN, Pierre
APPLICANT: LEGARAIN, Pierre
APPLICANT: BENRROUS, Richard
APPLICANT: BLOT, Guillaume
APPLICANT: LASSOT, Irina
TITLE OF INVENTION: PROTEINS THAT INTERACT WITH BETA TrCP
FILE REFERENCE: B471A
CURRENT APPLICATION NUMBER: US/10/023,530
CURRENT PILING DATE: 2002-04-22
PRIOR APPLICATION NUMBER: 60/256,276
PRIOR FILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 30
SOFTWARE: PATENTIN VERSION 3.1
SEQ ID NO:
LENGTH: 657
                                                                                                          RESULT 5
US-10-023-530-1
// Sequence 1, Application US/10023530
// Publication No. US20030007956A1
// GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTHER INFORMATION: Beta TrCP US-10-023-530-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: gene
LOCATION: (1)...
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PR FILING DATE: 2000-10-20

PR APPLICATION NUMBER: 60/249,299

PR PILING DATE: 2000-10-10

PR PILING DATE: 2000-10-10

PR FILING DATE: 2000-10-20

PR FILING DATE: 2000-10-20

PR PPLICATION NUMBER: 60/241,785

PR FILING DATE: 2000-10-20

PR APPLICATION NUMBER: 60/241,617

PR PILING DATE: 2000-10-20

PR PILING DATE: 2000-10-20

PR PILING DATE: 2000-10-20

PR PILING DATE: 2000-10-20
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R FILING DATE: 2000-09-29
R PILING DATE: 2000-10-02
R PILING DATE: 2000-10-02
R APPLICATION NUMBER: 60/237,038
R PILING DATE: 2000-10-02
R APPLICATION NUMBER: 60/236,370
R APPLICATION NUMBER: 60/236,370
R FILING DATE: 2000-09-29
                                                                                                                                                                                                                                                      R FILING DATE: 2000-09-21

R APPLICATION NUMBER: 60/228,924

R FILING DATE: 2000-08-30

R APPLICATION NUMBER: 60/224,518

R FILING DATE: 2000-08-14

R APPLICATION NUMBER: 60/236,369

RR APPLICATION NUMBER: 60/236,369

RR APPLICATION NUMBER: 60/224,519

RR APPLICATION NUMBER: 60/224,519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/251,868
FILING DATE: 2000-12-08
APPLICATION NUMBER: 60/229,344
FILING DATE: 2000-09-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 2000-09-01
APPLICATION WUMBER: 60/229,513
FILING DATE: 2000-09-05
APPLICATION NUMBER: 60/231,413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 2000-10-02
APPLICATION NUMBER: 60/237,037
FILING DATE: 2000-10-02
APPLICATION NUMBER: 60/237,040
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APPLICATION UNMBER: 60/239,935
FILING DATE: 2000-10-13
APPLICATION NUMBER: 60/239,937
                              FILING DATE: 2000-08-14
APPLICATION NUMBER: 60/251,869
                                                                                     FILING DATE: 2000-12-08
APPLICATION NUMBER: 60/235,834
FILING DATE: 2000-09-27
APPLICATION NUMBER: 60/234,274
FILING DATE: 2000-09-21
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FILING DATE: 2000-09-29
APPLICATION NUMBER: 60/251,856
FILING DATE: 2000-12-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/229,343
FILING DATE: 2000-09-01
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FILING DATE: 2000-09-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/220,964
FILING DATE: 2000-07-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/234,997
FILING DATE: 2000-09-25
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                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/234,223
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PRIOR 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        787 CTGGAATGTTTGAAAGTGTTWACAGGACACACARGCTCTGK-CTCTGTCTGCAGTATGAT 845
   rrraaaaacagaccacag----arggcccrccaaarrcarrraraggccarrarac 607
                                                                                                                                                                                                                              608 ccaaagarrarccaggararagagacraragaarcraacrggcggrgrggacgacacac 667
                                                                                                                                                                                                                                                                                                                                                                                                        GATCAGAAAATAGTAAGCGGCCTTCGAGACAACACAATCAAGATCTGGGATAAAAACACA 957
                                                                                                                                                                                                                                                                                                                                                                                                                                                      728 GATGAAAAATTATCAGTGGCC-TCGAGATAATTCTATTAAGATATGGGATAAAACCWGC 786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              846 GAKCCGTGTATTKTWACTGGCTCTTCAGATTCTACGGNGAGAGTGTGGGATGTGACACCG 905
                                                                                                                                                                                                                                                                                                                                  668 TIGCAGAGGATTCAGTGCCGCTCTGAAATAGTAAAGGTGTCTACTGTTTACAGTACGAT
                                                                                                                                                                             CCTAAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGATGTGGAAGACATAGT
                                                            TICAAAAACAAACCICCIGACGGGAAIGCICCICCCAACICTITITAIAGAGCACTITAI
                                                                                                                                                                                                                                                                                           TTACAGAGAATTCACTGCCGAAGTGAAACAAGCAAAGGAGTTTACTGTTTACAGTATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1078 GGTGAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGTTCTGC 1123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 15, Application US/10222020
Publication No. US20030175739A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENION: Nucleic Acids, Proteins, and Antibodies
FILE REFERENCE: PTZ08C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT PILING DATE: 2002-08-16
PRIOR APPLICATION NUMBER: US/10/222,020
CURRENT FILING DATE: 2002-08-16
PRIOR APPLICATION NUMBER: 10/116,016
PRIOR PLING DATE: 2002-04-05
PRIOR PLING DATE: 2001-01-17
PRIOR PLING DATE: 2001-01-17
PRIOR APPLICATION NUMBER: 60/180,628
PRIOR PLING DATE: 2000-02-04
PRIOR APPLICATION NUMBER: 60/180,628
PRIOR PLING DATE: 2000-02-04
PRIOR PLING DATE: 2000-02-04
PRIOR PLING DATE: 2000-02-04
PRIOR PLING DATE: 2000-06-28
PRIOR PLING DATE: 2000-08-14
PRIOR PLING DATE: 2000-08-14
PRIOR PLING DATE: 2000-08-14
PRIOR PLING DATE: 2000-07-11
PRIOR PLING DATE: 2000-07-11
PRIOR PLING DATE: 2000-07-11
PRIOR APPLICATION NUMBER: 60/225,758
PRIOR PLING DATE: 2000-07-11
PRIOR PLING DATE: 2000-07-11
PRIOR PLING DATE: 2000-07-14
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APPLICATION NUMBER: 60/216,880
FILING DATE: 2000-07-07
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FILING DATE: 2000-08-22
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PRIOR PILING DATE: 2000-10-13
PRIOR FILING DATE: 2000-10-20
PRIOR PELLICATION NUMBER: 60/246,474
PRIOR PLILING DATE: 2000-10-20
PRIOR PLILING DATE: 2000-10-20
PRIOR PLILING DATE: 2000-10-08
PRIOR PLILING DATE: 2000-11-17
PRIOR PLILING DATE: 2000-11-17
PRIOR PLILING DATE: 2000-11-17
PRIOR PLILING DATE: 2000-11-17
PRIOR PLILING DATE: 2000-08-14
PRIOR PLILING DATE: 2000-11-17
PRIOR PLILING DATE: 2000-09-14
PRIOR PLILING DATE: 2000-09
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GAGAGAGTGATCATAACAGGATCATCGACGTCAGAGTGTGGGATGTAAATACA 1077 958 TIGGAAIGCAAGCGAAIICTCACAGGCCAIACAGGIICAGICCICIGICTCCAGIAIGAI 1017 298 AATGGCACTTCCAGTATGATTGTGCCCAAGCAACGGAAACTCTCAGCAAGCTATGAAAAG 357 417 253 477 GIGGAACATCTIATITCACGAAIGIGICATIAICAGCAIGGACATATIAACTCTIACCIG 313 314 AAGCCCATGTTGCAGCGGGACTTTATTACCGCTTTACCAGAGCAAGGCTTAGATCACATA 373 AAAGAATGGCAGCGAGTGATCTCAGAAGAAATGCTTTGGAAGAAGAAGCTGATTGAACGAATG 493 GTCAGGACAGATTCTCTGTGGAGGCCTGGCAGAACGAAGGAGGATGGGGACAGTATTA 717 TIGCAGAGGATICAGTGCCGCTCTGAAAATAGTAAAGGTGTCTCACTGTTTACAGTACGAT 727 846 GAKCCGTGTATTKTWACTGCCTCTTCAGATTCTACGGNGAGAGTGTGGGGATGTGACACCG 905 AAACCTATGTTGCAGAGATTTCATAACTGCTCTGCCAGCTCGGGGGATTGGATCATATC 537 GCTGAGAACATTCTGTCATACCTGGATGCCAAATCACTATGTGCTGAACTTGTGTGC 597 AAGGAATGGTACCGAGTGACCTCTGATGGCATGCTGTGGAAGAAGCTTATCGAGAATG 657 ITCAAAAACAAACCICCIGACGGGAAIGCICCICCCAACICITITIAIAGAGCACITIAI 777 ritaaaaacacaccacaca----arggcccrccaaarrcarritaraggrcarrarac 607 CCTAAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGATGTGGGAAGACATAGT 837 TTACAGAGAATTCACTGCCGAAGTGAAACAAGCAAAGGAGTTTACTGTTTACAGTATGAT 897 GAICAGAAAATAGTAAGCGGCCTTCGAGACAACACAATCAAGATCTGGGGATAAAAAGACA 957 GATGAAAAATTATCAGTGGCC-TCGAGATAATTCTATTAAGATATGGGATAAAACCWGC 786 GIGGAACAICITATATCCCAAATGTGTGTTACCAACATGGGCACATAAACTCGTATCTT CTGGAATGTTTGAAAGTGTTWACAGGACACACARGCTCTGK-CTCTGTCTGCAGTATGAT GAAAAGGAACTGTGTGTCTAAATACTTTGAGCAGTGGTCAGAGTCAGATCAAGTGGAATTT . 80 Length 951; GGTGAAATGCTAAACACGTTGALTCACCATTGTGAAGCAGTTCTGC 1123 Score 435.4; DB 12; Length Pred. No. 1.7e-128; 5; Mismatches 216; Indels PRIOR APPLICATION NUMBER: 60/232,399
PRIOR PILING DATE: 2000-09-14
PRIOR PILING DATE: 2000-09-14
PRIOR PILING DATE: 2000-09-14
PRIOR PELING DATE: 2000-10-20
PRIOR PLING DATE: 2000-10-20
PRIOR PELING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/241,806
PRIOR PELING DATE: 2000-10-20
PRIOR PELING DATE: 2000-10-20
PRIOR PILING DATE: 2000-10-20 Query Match
Best Local Similarity 72.3%;
Matches 597; Conservative 134 598 494 899 728 1018 1078 358 418 254 478 538 374 434 629 718 554 178 838 868 787 gg ò g qq ઠે g ò g à Dp δ 음 ŝ g ઠે qq ठ à ద ò ò ò

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Sequence 2778, Application US/09864761

Sequence 2778, Application US/09864761

Sequence 2778, Application US/09864761

Sequence 2778, Application US/09864761

Sequence 2778, Application Sharton G.

APPLICANT: Bank, David R.

APPLICANT: HIGH SHARTON

TITLE OF INVENTION: HUMBER: US/09/09864,761

TITLE OF INVENTION: HUMBER: US/09/09/02/04

TITLE OF INVENTION: HUMBER: US/09/09/02/04

TITLE OF INVENTION: HUMBER: US/09/09/02/04

TITLE OF INVENTION WUMBER: US/09/09/02/04

PRIOR APPLICATION WUMBER: US/09/03/02/04

PRIOR APPLICATION WUMBER: US/09/05/26

PRIOR PRIOR APPLICATION WUMBER: PCYUGO1/00666

PRIOR APPLICATION WUMBER: PCYUGO1/00669

PRIOR PRIOR APPLICATION WUMBER: PCYUGO1/00669

PRIOR PRIOR APPLICATION WUMBER: PCYUGO1/00669

PRIOR APPLICATION WUMBER: PCYUGO1/00669

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PRIOR APPLICATION WUMBER: PCYUGO1/00661
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1018 GAGAGAGTGATCATAACAGGATCATCGGATTCCACGGTCAGAGTGTGGGGATGTAAATACA 1077
                                CCTAAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGATGTGGAAGACATAGT 837
                                                                                  608 CCAAAGATTATCCAGGATATAGAGACTATAGAATCTAACTGGCGGTGTGGACGACACAAC
                                                                                                                                             897
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APPLICATION NUMBER: US 09/608,408
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                                                                                                                     Sequence 15, Application US/10116016

Publication No. US2003005437941

GENERAL INPORMATION:

APPLICANT: ROSen et al.

TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies

FILE REPRENCE: PT208C1

CURRENT APPLICATION NUMBER: US/10/116,016

CURRENT FILING DATE: 2002-04-05

Prior Application removed - See File Wrapper or Palm

NUMBER OF SEQ ID NOS: 53

SOFTWARE: Patentin Ver. 2.0

SEQ ID NOS:
,906 GIGAAAGNICITAACACAITGAICCNCCCNAITGANGCIGAITIGC 951
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20.2%; Score 435.4; DB 14;
Best Local Similarity 72.3%; Pred. No. 1.7e-128;
Matches 597; Conservative 5; Mismatches 216;
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LOCATION: (941)
OTHER INFORMATION: n equals a,t,g, or
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OTHER INFORMATION: n equals a,t,g, or NAME/KEY: misc feature
LOCATION: (913)
OTHER INFORMATION: n equals a,t,g, or NAME/KEY: misc feature
LOCATION: (931)
OTHER INFORMATION: n equals a,t,g, or NAME/KEY: misc feature
LOCATION: (935)
OTHER INFORMATION: n equals a,t,g, or OTHER INFORMATION: n equals a,t,g, or
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ORGANISM: Homo sapiens
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JS-10-116-016-15
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INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
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NN: EXPRESSED IN HELLO, SIGNAL = 2.6

NN: EXPRESSED IN HELLO, SIGNAL = 2.6

NN: EXPRESSED IN HELLO, SIGNAL = 2.6

NN: EXPRESSED IN BT44, SIGNAL = 2.8

NN: EXPRESSED IN DOUE MARROW, SIGNAL = 1.6

NN: EXPRESSED IN PLACENTA, SIGNAL = 1.9

NN: EXPRESSED IN HEART, SIGNAL = 1.9

NN: EXPRESSED IN ADULT LIVER, SIGNAL = 1.7

NN: EXPRESSED IN ADULT LIVER, SIGNAL = 1.7

NN: EXPRESSED IN FETAL LIVER, SIGNAL = 1.7

NN: EXPRESSED IN PETAL LIVER, SIGNAL = 1.7

NN: EXPRESSED IN SURJECT LIVER, SIGNAL = 1.7

NN: EXPRESSED IN ADULT LIVER, SIGNAL = 1.7

NN: EXPRESSED IN SURJECT LIVER 3.00e-162
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Pred. No. 8e-56;
0; Mismatches 91; Indels 5
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NUMBER OF SEQ ID NOS: 49117
SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
SEQ ID NO 19492
                                                                                                                                   CURRENT FILING DATE: 2001-05-23
PRIOR APPLICATION NUMBER: US 60/180,312
PRIOR PILING DATE: 2000-02-04
PRIOR PILING DATE: 2000-02-05
PRIOR PELLING DATE: 2000-05-26
PRIOR PELLING DATE: 2000-05-26
PRIOR PELLING DATE: 2000-08-03
PRIOR PELLING DATE: 2000-08-03
PRIOR PELLOATION NUMBER: US 60/236,359
PRIOR PELLOATION NUMBER: US 60/236,359
PRIOR PELLOATION NUMBER: US 60/236,359
PRIOR PELLOATION NUMBER: PCT/USO1/00665
PRIOR PELLOATION NUMBER: PCT/USO1/00665
PRIOR PELLOATION NUMBER: PCT/USO1/00666
PRIOR PELLOATION NUMBER: PCT/USO1/00669
PRIOR PELLOATION NUMBER: PCT/USO1/00669
PRIOR PELLOATION NUMBER: PCT/USO1/00669
PRIOR APPLICATION NUMBER: PCT/USO1/00669
PRIOR PELLING DATE: 2001-01-30
PRIOR APPLICATION NUMBER: PCT/USO1/00669
PRIOR APPLICATION NUMBER: PCT/USO1/00669
PRIOR PELLING DATE: 2001-01-30
       TITLE OF INVENTION: HUMAN GENOME-DERIVED ETITLE OF INVENTION: GENE EXPRESSION ANALY
FILE REFERENCE: Accomica-X-1
CURRENT APPLICATION NUMBER: US/09/864,761
CURRENT FILING DATE: 2001-05-23
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278; Conservative
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ORGANISM: Homo sapiens
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Best Local 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   299 cigigaariridenegraerereaareegeacaagee----rengreegeagaag
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    479 GAIGGIGACCIGIICCAAGGACCGCICCAIIGCIGIGGGACAIGGCIICTGCGACCGA
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2
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N: EXPRESED IN LUNG, SIGNAL = 2.6
N: EXPRESED IN LUNG, SIGNAL = 3.1
N: EXPRESSED IN HELA, SIGNAL = 2.8
N: EXPRESSED IN HOWE MARROW, SIGNAL = 0.75
N: EXPRESSED IN HOWE WARROW, SIGNAL = 1.6
N: EXPRESSED IN HEART, SIGNAL = 1.9
N: EXPRESSED IN RAPAL, SIGNAL = 1.9
N: EXPRESSED IN RADIAT LIVER, SIGNAL = 1.8
N: EXPRESSED IN FETAL LIVER, SIGNAL = 1.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Match 12.6%; Score 272; DB 9; Length 479; Local Similarity 74.2%; Pred. No. 3.5e-76; es 359; Conservative 0; Mismatches 120; Indels
PRIOR FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US 09/774,203
PRIOR FILING DATE: 2001-01-29
NUMBER OF SEQ ID NOS: 49117
SOTTWARE: Annomax Sequence Listing Engine vers: 1.1
LENGHH: 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1206 CATTACCCTCCGGAGGGTGCTGGTCGGACACCGAGCTGC
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ED IN HBL100,
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Patent No. US20020048763A1
APPLICANT: Penn, Sharron G.
APPLICANT: Penn, Sharron G.
APPLICANT: Hank, David R.
APPLICANT: Hanzel, David K.
APPLICANT: Cont. Wensheng
                                                                                                                                                                                                                                                                                                                                             MAP
                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                  FEATURE:

OTHER INPORMATION: MY
OTHER INPORMATION: E)
OTHER INFORMATION: E)
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Matches 359;
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Sequence 4953, Application US/10029386 Publication No. US20030194704A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 Similarity
202; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
US-10-029-386-18709/c
                                                                                                                                                                                                                                                         SEQ ID NO 4953
LENGTH: 524
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Best Local
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Matches
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                                                           1147 ATGGTGACCTGCTCCAAAGATCGTTCCATTGCTGTATGGGATATGGCCTCCCCAACTGAC 1206
                                                                                                                                       1207 ATTACCCTCCGGAGGGTGCTGGTCGGACACCGAGCTGCTGTCAATGTTGTAGACTTTGAT 1266
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238 CATIGCAGIAIGGGAIAIGGCCINCCCAACIGACAICACCCIICGCAGGGIGCIIGICGG 297
309 CITAACACATTAATCCACCACACAATGAGGATGTACTGCACTTACGCTTCAGCAGTGGACTG 250
                                                                                                249 ATGGTGACCTGTTCCAAGGACCGCTCCATTGCTGTGGGGACATGGCTTCTGCGACCGAT 190
                                                                                                                                                                                                                                                         70
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                                                                                                                                                                      189 ArcacttracGreGreTcrcGfreTcrcCacrGreGreTcrcTagragactridac
                                                                                                                                                                                                                                                       129 GAGAAATACATCGTGTGTGTGTGTGACAGGACCATCAAAGTCTGGAGCATGAGCACC
                                                                                                                                                                                                                                                                                              TGTGAATTTGTAAGGACCTTAAATGGACACAAACGAGGCATTGCCTGTTTGCAGTACAGG
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; LOCATION: (261)

; OTHER INFORMATION: unsure at all n locations

; OTHER INFORMATION: Clone ID: 13-LIB3058-049-Q1-K1-D1

US-09-960-352-2934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8.4%; Score 180.2; DB 10;
93.1%; Pred. No. 8.3e-47;
iive 0; Mismatches 14; ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Fac, Neeley C.
APPLICANT: Tac, Nengbing
APPLICANT: Tac, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Byatt, John C.
TITLE OF INVENTION: NUCLEIC ACID AND CTHER MOLECU;
TITLE OF INVENTION: NUCLEIC ACID AND CTHER MOLECU;
FILLE PEFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT APPLICATION NUMBER: 2001-09-24
NUMBER OF SEQ ID NOS: 15112
LENGTH: 319
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2934, Application US/09960352 Patent No. US20020137139A1
                                                                                                                                                                                                                                                                                                                                                                          1387 GACAGGCTGGTAGT 1400
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Matches 188; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                             GATGGGCTGGTTGT
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US-10-029-386-4953/c
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JS-09-960-352-2934
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PUBLICATION NO. US20030194704A1
GENERAL INFORMATION:
APPLICANT: Penn, Sharron G.
APPLICANT: Penn, Sharron G.
APPLICANT: Rank, David R.
APPLICANT: HANZEL, David K.
APPLICANT: TITLE OF INVENTION: EXPRESSION ANALYSIS TWO
FILE REFERENCE: AEOMICA-X-2
CURRENT APPLICATION NUMBER: US/10/029,386
CURRENT FILING DATE: 2001-12-20
NUMBER OF SEQ ID NOS: 34288
SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
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Publication No. US20030194704A1

GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Penn, Sharron G.
APPLICANT: Penn, Sharron G.
APPLICANT: Penn, Sharron G.
APPLICANT: Hansel, David R.
APPLICANT: Hansel, David R.
APPLICANT: Hansel, David R.
APPLICANT: Hansel, David R.
APPLICANT: Penn, Sharron G.
APPLICANT: Hansel, David R.
APPLICANT: Hansel, David R.
APPLICANT: Benn C.
APPLICANT: Bann GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR CURRENT APPLICANTON: WINNERR: US/10/029,386
CURRENT APPLICANTON NUMBER: US/10/029,386
CURRENT APPLICANTON SEQUENCE Listing Engine vers. 1.1
SEQ ID NO 18709
LENGTH: 250
TYPE: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   434 AGAGTGTGGGATGTGAACACGGGTGAAGTTCTTAACACATTGATCCACCACAATGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GITCIGCACTIGCGITTCAATAATGGCATGATGGTGACCTGCTCCAAAGATCGTTCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTATTGCACTTACGCTTCAGCAATGGACTGATGGTGACCTGTTCCAAGGACCGCTCCATT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: MAP TO ACC011387.4

OTHER INPORMATION: EXPRESEED IN ADULT LIVER, SIGNAL = 2.5

OTHER INFORMATION: EXPRESEED IN HEART, SIGNAL = 4.5

OTHER INFORMATION: EXPRESEED IN BRAIN, SIGNAL = 3

OTHER INFORMATION: EXPRESEED IN BONE MARROW, SIGNAL = 1.6

OTHER INFORMATION: EXPRESEED IN BONE MARROW, SIGNAL = 2.6

OTHER INFORMATION: EXPRESEED IN PLACENTA, SIGNAL = 4.1

OTHER INFORMATION: EXPRESEED IN PLACENTA, SIGNAL = 4.1

OTHER INFORMATION: STREAM AD033280.1, BVALUE 0.006+00

CHER INFORMATION: EST_HUMAN HIT: BI088274.1, EVALUE 0.006+00

US-10-029-386-4953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7.8%; Score 167.8; DB 12; Length
78.0%; Pred. No. 1.2e-42;
7ative 0; Mismatches 57; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      943 TGGGATAAAAACACATTGGAATGCAAGCGAATTCTCACAGGCCATACAGGTTCAGTCCTC 1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCTCCAGTATGATGAGAGAGAGTGATCATAACAGGATCATCGGATTCCACGGTCAGAGTG 1062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1063 TGGGATGTAAATACAGGTGAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGTTCTG 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1123 CACTTGCGTTTCAATAATGGCATGATGGTGACCTGCTCCAAAGATCGTTCCATTGCTGTA 1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGGATATGGCCTCCCCAACTGACATTACCCTCCGGAGGGTGCTGGTCGGACACCGAGCT 1242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         955 TGGGATATTGAGACAGGCCAGTGTTT-----ACATGTTTTGATGGGTCATGTTGCA 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1243 GCTGTCAATGTTGTAGACTTTGATGACAAGTACATTGTTTCTGCATCTGGGGATAGAACT 1302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1066 GTAAAGGTGTGGGATCCAGAGACTGAAACCTGTCTACACGTTGCAGGGGGATACTAAT 1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        883 IGTITACAGTATGATGATCAGAAAATAGTAAGCGGCCTTCGAGACAACACAATCAAGATC 942
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               recreaceacracaceararereresaciaearragesesaciareseses 774
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    TITICCCATIGGITCCAGACAAAGGIGACTIATAAATATATATTAAGIGITTIGCCAGAA 2143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Gaps
                                                                                                                                                                              Query Match 5.8%; Score 124.2; DB 12; Length 1620; Best Local Similarity 50.2%; Pred. No. 2.7e-28; Matches 340; Conservative 0; Mismatches 328; Indels 9;
                                                                                                                                                                                                                                                                                                                  RESULT 15
US-10-245-618-13
Sequence 13, Application US/10245618
Publication No. US20030143582A1
GENERAL INFORMATION:
APPLICANT: Reed, Steven
APPLICANT: Struck, Charles
APPLICANT: Spruck, Charles
APPLICANT: Sangfelt, Olle
ITILE OF INVENTION: HCDC4 MODULATES CYCLIN E DEGRADATION
FILE REFERENCE: TSRI 779.2
CURRENT PELICATION WUMBER: US 60/404,116
PRIOR FILING DATE: 2002-09-16
PRIOR FILING DATE: 2002-09-16
PRIOR FILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 48
SOFINARE: PSESEE for Windows Version 4.0
SSOFIWARE: PSESEE for Windows Version 4.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                               2086
                                                                                                                                                                                                            175
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1059 AGTGTGGGATGTAAATACAGGTGAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGT 1118
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTATGGGATATGGCCTCCCCAACTGACATTACCCTCCGGAGGGTGCTGGTCGGACACCG 1238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1239 AGCTGCTGTCAATGTTGTAGACTTTGATGACAAGTACATTGTTTCTGCATCTGGGATAG 1298
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    190 ATTGCACTTACGCTTCAGCAATGGACTGAAGGTGACCTGTTCCAAGGACCGCTCCATTGC 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTGTGGGATGTGAACACGGGTGAAGTTCTTAACACATTGATCCACCACAATGAGGCTGT 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   71
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7.3%; Score 157.4; DB 11; Length 475;
Best Local Similarity 92.1%; Pred. No. 2.4e-39;
Matches 164; Conservative 0; Mismatches 14; Indels 0;
                                  FEATURE:
OTHER INFORMATION: MAP TO ACO11387.4
OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 2.5
OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 4.5
OTHER INFORMATION: EXPRESSED IN UNG, SIGNAL = 1.8
OTHER INFORMATION: EXPRESSED IN UNG, SIGNAL = 1.8
OTHER INFORMATION: EXPRESSED IN DONE MARROW, SIGNAL = 4.1
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 4.1
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 4.1
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 4.1
OTHER INFORMATION: STRINGSOG497, EVALUE 0.00e+00
OTHER INFORMATION: WI HIT: G16306497, EVALUE 5.00e+43
US-10-029-386-18709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
7.6%; Score 162.6; DB 12; Length
Best Local Similarity 78.3%; Pred. No. 3.1e-41;
Matches 195; Conservative 0; Mismatches 54; Indels
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Sequence 15756, Application US/09918955

Publication No. US20030073623A1

GENERAL IMPRORMATION:

APPLICANT: Hyseq, Inc.

TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBT.

TITLE OF INVENTION: NOVEL NUCLEIC ACID SEQUENCES OBT.

FILE REFERENCE: 2041.-756

CURRENT PELLING DATE: 2001.07-30

PRIOR APPLICATION NUMBER: US/09/918,995

CURRENT FILING DATE: 1999-01-20

NUMBER OF SEQ ID NOS: 38054

SOFTWARE: PastSEQ for Windows Version 3.0

LENGTH: 475
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CRGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)...(475)
COTER INFORMATION: n = A,T,C or
US-09-918-995-15756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1299 AACTATAAA 1307
ORGANISM: Homo sapiens
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RESULT 2
US-08-951-621-2
US-08-951-621-2
; Sequence 2, Application US/08951621
; Patent No. 6573094
; GENERAL INFORMATION:
; APPLICANT: HARPER, JEFFREY W.
; TITLE OF INVENTION: F-BOX GENES AND PROTEINS
; NUMBER OF SEQUENCES: 59
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Madlen & Carroll, LLP
sTREET: 220 Montgomery Street, Suite 2200
3 US-09-184-445-1

4 US-09-357-206A-9

4 US-08-914-999-5-1

4 US-08-916-421B-1

4 US-08-916-421B-1

4 US-08-916-421B-1

1 US-08-916-421B-1

3 US-09-313-55-10

3 US-08-767-993-10

3 US-09-032-742-21

3 US-09-032-742-21

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8 US-09-032-742-25

9 US-09-032-742-25

9 US-09-032-742-25

9 US-09-036-982-336-1
                                                                                                                                                                                                                                                                                                           APPLICANT: Harper, Jeffrey W.
APPLICANT: Elledge, Stephen J.
TITLE OF INVENTION: F-BOX PROTEINS AND GENES
FILE REFERENCE: BCM-03510
CURRENY FAPLICATION WHERE: U8/09/172,841
CURRENY FILING DATE: 1998-10-15
BARLIER APPLICATION NUMBER: 08/951,621
BARLIER FILING DATE: 1991-10-16
NUMBER OF SEQ. ID NOS: 60
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                             ; Sequence 2, Application US/09172841; Patent No. 6232081; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 99.2%;
Matches 125; Conservative
           TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGTGG 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CIGIGG 126
  SEQ ID NO 2
LENGTH; 126
                                                                                                                                                                                                                                                       RESULT 1
US-09-172-841-2
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Sequence 476, App
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6458.606 Million cell updates/sec
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score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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Sequence 1, Al
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1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
          GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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4 US-09-962-665-8

5 US-09-184-446-1

1 US-09-669-816-2

1 US-09-689-131-476

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Maximum Match 100%
Listing first 45 summaries
                                                     nucleic - nucleic search, using sw model
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Gapop 10.0 , Gapext 1.0
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Pred. No. 9.4e-31;
0; Mismatches 1;
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1781 GTATATCTGGTCAATATTTATTTAGGGTTCAAATGATAAAACTATCAAGGTTTGGGATT 1840
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3.8%; Score 82.2; DB 4; Length 2
Best Local Similarity 47.4%; Pred. No. 4.4e-16;
Matches 286; Conservative 0; Mismatches 308; Indels
                                              ATTORNEY AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION UNDRER: 26,742
RETERENCE/DOCKET UNDRER: 601-1-078
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
TELEPHONE: 201-487-5800
TELEPHONE: 201-483-1684
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 2237 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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MOLECULE TYPE: CDNI
HYPOTHETICAL: NO
     FILING DATE:
CLASSIFICATION:
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APPLICANT: Hait, William N.
APPLICANT: Pavv. Saren S.
TITLE OF INVENTION: ELONGATION FACTOR-2 KINASE (EF-2 KINASE)
TITLE OF INVENTION: AND METHODS OF USE THEREFOR
TITLE DE INVENTION: AND METHODS OF USE THEREFOR
CORRESPONDENCE ADDRESS:
ADDRESSEE: David A. Jackson, Esq.
STREET: 111 Hackensack Ave, Continental Plaza, 4th
STREET: Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.8%; Score 124.4; DB 4; Length 126; 99.2%; Pred. No. 9.4e-31; ive 0; Mismatches 1; Indels 0
                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
SOFTHANG SYSTEM: PC-DOS/MS-DOS
SOFTHANE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 16-OCT-1997
CLASSIFICATION: 536
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/914,999
                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: MacKnight, Kamrin T.
REGISTRATION INTHRER: 38,230
REPRENCE/DOCKET NUMBER: BCM-02999
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 705-8410
TELEPAK: (415) 705-8410
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                     California
. United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: other nucleic acid
DESCRIPTION: /desc = "DNA"
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WEDLUM TYPE: Floppy disk
CMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Patent No. 6346406
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 126 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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San Francisco
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STATE: New Jersey
COUNTRY: USA
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CTGTGG 126
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Best Local Similarity
Matches 125; Conserv
                     STATE: C
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TELERA: (703) 413-2300
TELEX: 248955 OPAT UR
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 2085 hard
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nucleic acid
IDEDNESS: unknown
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MOLECULE TYPE: CDNA
ORIGINAL SOURCE:
ORGANISM: Bos taurus
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, LOCATION:
US-08-283-917-8
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                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
GOMPUTER: IBM PC compatible
OPPRATE: TAPPE: FLOPS/MS-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 24-JUL-1997
CLASSIFICATION: 435
                                    APPLICANT: Greenwald, Iva
APPLICANT: Greenwald, Iva
APPLICANT: Greenwald, E. Jane
TITLE OF INVENTION: SEL-10 AND USES THEREOF
NUMBER OF SEQUENCES: 7
CORRESPONDENCES: 7
CORRESPONDENCE DUBRES: ADDRESSEE: Cooper & Dunham LLP
STREET: 1185 Avenue of the Americas
CITY: New York
STRATE: New York
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 0555/53200/JPW/AKC TELECOMMUNICATION INFORMATION: TELEPAX: (212) 278-0400
TELEPAX: (212) 278-055
INFORMATION FOR SEQ ID NO: 1: SEQUENCE CHARACTERISTICS: LEDGENCE CHARACTERISTICS: TYPE: nucleic acid STRANDENESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 24-JUL-1997
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION INVESE: 28-678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
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Best Local Similarity 50.6
Matches 162; Conservative
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91..1854
Patent No. 6087153
GENERAL INFORMATION:
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LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IS-08-899-578-1
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RESULT 5 US-08-283-917-8 , Sequence 8, Application US/08283917

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GENERAL INFORMATION:
APPLICANT: ADACH!, HIDEKI
APPLICANT: INGUINOTO, MASAFUMI
APPLICANT: INGUE, KEIZO
APPLICANT: INGUE, KEIZO
APPLICANT: ARAI, HIROYUKI
TITLE OF INVENTION: OXIDIZED PHOPHOLIPID DEGRADING ENZYME
TITLE OF INVENTION: AND GENE THEREOF
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: ABUSTANI, P.C.
ADDRESSEE: NEUSTADI, P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                      1755 S. Jefferson Davis Highway, Suite 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:

MEDIUM TYPE: RIOPPY disk

COMPUTER: READABLE FORM:

MEDIUM TYPE: RIOPPY disk

COMPUTER: ISM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURPACITION NUMBER: US/08/283,917

FILING DATE: 03-AUG-1994

CLASSIPICATION: 435

PRIOR APPLICATION NUMBER: US/08/283,917

FILING DATE: 03-AUG-1993

ATTORNEY/AGENT INFORMATION:
NAME: Oblon, NO. 5849557man F.

REFIERMATION NUMBER: 24 618

REFERENCE/DOCKET NUMBER: 2292-030-0

TELECOMMUTCATION: NUMBER: 2292-030-0

TELECOMMUTCATION: NUMBER: 2292-030-0

TELECOMMUTCATION: NUMBER: 2292-030-0

TELECOMMUTCATION: NUMBER: 23000
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                                                                                                                                                               Score 50.8; DB 2; Length 2085;
Pred. No. 8.2e-06;
0; Mismatches 277; Indels 15.
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COUNTRY: USA
ZIP: 22313-029
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OCNPUTER: FROM PC COMPATIBLE
SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 14, Application US/08232463
Patent No. 5670367
GENERAL INFORMATION:
APPLICANT: SCHEIFLINGER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: SCHEIFLINGER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
CORRESSED ADDRESS:
ADDRESSEE: Foley & Lardner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Foley & Lardner
1800 Diagonal Road, Suite 500
                                                                                                                                                            Query Match
Best Local Similarity 47.3%;
Matches 262; Conservative
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STREET: 1800 -
CITY: Alexandria
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; LOCATION;
US-08-961-716-8
        ORGANISM:
                                   FEATURE:
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1421 ACAATGTTTCTTCAGTAGCCATCATGCCCAATGGAGATCATATAGTGTCTGCCTCAAGGG 1480
                                                       ATAGAACTATAAAGGTATGGAACACAAGTACTTGTGAATTTGTAAGGACCTTAAATGGAC 1354
                                                                                                        1481 ATAAAACTATAAAAATGTGGAAGTGCAAACTGGCTACTGTGTGAAGACATTCACAGGAC
                                                                                                                                                       ACAAACGAGGCATTGCCAGTACAGGGA-----CAGGCTGGTAGTGAGTGGCT
                                                                                                                                                                                                           1541 ACAGAGAATGGGTACGTATGGTGCGGCCAAATCAAGACGGCACTCTGATAGCCAGCTGTT
                                                                                                                                                                                                                                                               1409 CATCTGACAACACTATCAGATTATGGGACATAGAATGTGGTGCATGTTTACGAGTGTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application US/08961716
Patent No. 5860272
GENERAL INFORMATION
APPLICANT: ADACHI, HIDEKI
APPLICANT: TSUJINOTO, MASAFUMI
APPLICANT: INOUE, KEIO,
APPLICANT: INOUE, KEIO,
APPLICANT: OF INVENTION: OXIDIZED PHOPHOLIPID DEGRADING ENZYME
TITLE OF INVENTION: AND GENE THEREOF
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: OBLOW, SPILVAK, MCCLELLAND, MAIER &
ADDRESSEE: NEUSTADI.P.C.
STREET: 1755 S. Jefferson Davis Highway, Suite 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
PRIOR APPLICATION NUMBER: US/US/SEL,/IE
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/283,917
FILING DATE: US.AUG-1994
APPLICATION NUMBER: UP 209943/1993
FILING DATE: 03.AUG-1993
ATTORNEY/AGENT INFORMATION:
NAME: ODDION, NO. 5880272man F.
REGISTRATION NUMBER: 24,618
REGISTRATION NUMBER: 2292-030-0
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (703) 413-220
TELEFAX: 24885 OPAT UR
INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHRACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/961,71
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1529 CCTATGATGGAAAA 1542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1721 TCTCTGAAGCAACA 1734
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TYPE: nucleic acid
STRANDEDNESS: unknown
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 1755 S. CITY: Arlington STATE: Virginia COUNTRY: U.S.A. ZIP: 22202
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ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-08-961-716-8
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1325 CTTGTGAATTTGTAAGGACCTTAAATGGACACAAGGAGGCATTGCCTGTTTGCAGTA-- 1382
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1439 TAGAATGTGGTGCATGTTTACGAGTGTTAGAAGGCCATGAGGAATTGGTGCGTTGTATTC 1498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1745 CTCCCAATGGGAGATTCCTGGCTACAGGAGCAACAGATGGCAGAGTGCTTCTTTGGGATA 1804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1805 indgacanddingangcingadaanhaaaddgccacccidanacadicidricacina 1864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1625 ATTCTAATTATGTTGCTACGGGCTCTGCAGACAGAACTGTGCGGCTCTGGGACGTCCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1265 ATGACAAGTACATTGTTTCTGCATCTGGGGATAGAACTATAAAGGTATGGAACACAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATA-BINDING PROTEIN ASSOCIATED FACTORS, NUCLEIC ACIDS ENCODING TAFS AND METHODS OF USE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
2.2%; Score 47.8; DB 1; Length 215
Best Local Similarity 52.6%; Pred. No. 8e-05;
Matches 131; Conservative 0; Mismatches 112; Indels
TITLE OF INVENTION: TATA-BINDING PROTEIN ASSOCIATED FAC
TITLE OF INVENTION: UNCLEIC ACIDS ENCODING TAFS AND MET
WHOMER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: FLERK, HOHBACH, TEST, ALBRITTON & HERBERT
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
CITY: California
COUNTR: USA
                                                                                                                                                                                                                                                                                          CAPPUTER EALCABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPTITE: IBM PC compatible
COMPTITE: IBM PC compatible
COMPTITE: IBM PC compatible
COMPTITE: IBM PC COMPAINE
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/188,582
FILING DATE: 28-JAN-1994
CLASSIFICATION: 435
ATTONINY/AGENT INFORMATION:
NAME: COMMAN: Richard A
REGISTRATION NUMBER: 36,627
REFERENCE/POCKET NUMBER: 36,627
REFERENCE/POCKET NUMBER: 36,627
RELEFEX: (415) 781-1989
TELEFEX: (415) 781-1989
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US-08-646-715-17
Sequence 17, Application US/08646715
Patent No. 5637686
GENERAL INPORMATION:
APPLICANT: Tjian, Robert
APPLICANT: Comai, Lucio
APPLICANT: Dynlact, Brian D.
APPLICANT: Hoey, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1499 GATTTGATA 1507
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1.2112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ) NAME/KEY: CDS
; LOCATION: 1...
US-08-188-582-17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       886 TTACAGTATGATGATCAGAAATAGTAAGCGGCCTTCGAGACAACAACAATCAAGATCTGG 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 646 ATCGAGAGAATGGTCAGGACAGATTCTCTGTGGAGAGGCCTGGCAGAACGAAGAGGATGG 705
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
2.3%; Score 50; DB 1; Length 7218;
Best Local Similarity 4.9%; Pred. No. 3.5e-05;
Matches 20; Conservative 218; Mismatches 168; Indels
                                                     PILING DATE:
CLASSIFICATION: 435
PILOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
FILING DATE:
APPLICATION NUMBER: EP 91 114 300.6
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29 768
REFERENCE/DOCKET NUMBER: 39,768
TELEPHONE: (703)83-4109
TELEPHONE: (703)836-9300
TELEPAX: (703)83-4109
TELEFAX: (703)83-4109
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                                      US/08/232,463
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Weinzierl, Robert O.J.
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Patent No. 5534410
GENERAL INFORMATION:
APPLICANT: Tjian, Robert
APPLICANT: Comai, Lucio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Comai, Lucio
Dynlact, Brian D.
Hoey, Timothy
Ruppert, Siegfried
Tanese, Naoko
   CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; CLONE: pTZgpt-Fls
US-08-232-463-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RESULT 8
| US-08-188-582-17
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APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1439 TAGAATGTGGTGCATGTTTACGAGTGTTAGAAGGCCATGAGGAATTGGTGCGTTGTATTC 1498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1745 CTCCCAATGGGAGATTCCTGGCTACAGGAGCAACAGATGGCAGAGTGCTTCTTTGGGATA 1804
        APPLICANT: Wang, Edith
APPLICANT: Wang, Edith
APPLICANT: Wang, Edith
TITLE OF INVENTION: TATA-BINDING PROTEIN ASSOCIATED FACTORS,
TITLE OF INVENTION: NUCLEIC ACIDS ENCODING TAFS AND METHODS OF USE
NUMBER OF SEQUENCES: 3
CORRESPONDENCES: 3
ADDRESSEE: FLERR, HORBACH, TEST, ALBRITTON & HERBERT
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Prancisco
CITY: San Prancisco
STRIE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1625 ATTCTAATTATGTTGCTACGGGCTCTGCAGACAGAACTGTGGGGGCTCTGGGACGTCCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1265 ATGACAAGTACATTGTTTCTGCATCTGGGGATAGAACTATAAAGGTATGGAACACAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1383 ----CAGGGACAGGCTGGTAGTGAGTGGCTCATCTGACAACACTATCAGATTATGGGACA
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                                                                                                                                                                                                                                                               ZIP: 9411-4187

COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURENT APPLICATION DATA:
APPLICATION NUMBER: US/08/646,715
FILING DATE: 09-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNGER: US 08/188,582
ATTORNEY/AGENT INFORMATION:
NAME: Osman, Richard A
REGISTRATION NUMBER: 36,627
REPERBNCE/DOCKET NUMBER: A-57650-2/AJT/RAO
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRAX: (415) 781-1989
Ruppert, Siegfried
Tanese, Naoko
Wang, Edith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 2152 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
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; LOCATION: 1...
US-08-646-715-17
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|RESULT 10 |US-08-232-463-14

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1954 TCGGCCCAGGACGGTCTACTCAGCACAACTGACTGCTTCAGTGCTGCTATCAGAAGATGT 2013
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3.6%; Pred. No. 0.076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 1.9%; Score 39.8; DB 1; Length 7
Best Local Similarity 3.6%; Pred. No. 0.076;
Matches 14; Conservative 210; Mismatches 167; Indels
                                                                                                                                                                                                                                 STATE: VA
COUNTRY: USA
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPAINE: BM PC-DOS/NS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DAMES: US/08/232,463
30472/114 IMMU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION
PILING DATE:
RPLICATION NUMBER: EP 91 114 300.6
FILING DATE: 26-AUG-1991
ATTORNEY, SEEDER INFORMATION:
NAME: BENT, SEEDER A.
REGIETRATION NUMBER: 29, 768
REFERENCE/DOCKET NUMBER: 30472/114 IM
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (703)683-4109
                                                                                                                                                                                                  Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
CLASSIFICATION: 435
PRICR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
                                                                                                                                                                        SSEE: Foley & Lardner F. 1800 Diagonal Road, Alexandria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: 899149
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 7218 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
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IMMEDIATE SOURCE
CLONE: pTZgpt
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SUFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/738,367
                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: U.S.A.
ZIP: 02140
ZOMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC Compatible
COMPATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0. U
                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Genetics Institute,
STREET: 87 CambridgePark Drive
                             Sequence 1, Application US/08738367
Patent No. 5827688
GENERAL INFORMATION:
APPLICANT: Jacobs, Kenneth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 6, Application US/08738367; Patent No. 5827688; GENERAL INFORMATION:
                                                                                                                  APPLICANT: MCCOY, John
APPLICANT: LaVallie, Edward
APPLICANT: Ravallie, Edward
APPLICANT: Racie, Lisa
APPLICANT: Treacy, David
APPLICANT: Treacy, Maurice
APPLICANT: Spaulding, Vikki
TITLE OF INVENTION: SECRETED PR
TITLE OF INVENTION: ENCODING TH
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: BROWIT. SCOLE 32,724
REGISTRATION NUMBER: 32,724
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 876-5851
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 433 base pairs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                            Massachusetts
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STREET: 8/ ...
TTY: Cambridge
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APPLICANT:
APPLICANT:
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US-08-738-367-6
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Best Local 8
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107 GTCATAACTTCTTCATGGGATAATATGTCTATTTTTATTCCATAGCATTTGGAAGACGC 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                167 CAGGACACGTTAATGGGACATGATGATGCTGTTAGTAAGATCTGTTGGCATGACAACAGG
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0
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APPLICANT: Jacobs, Kenneth
APPLICANT: Jacobs, John
APPLICANT: LaVallie, Edward
APPLICANT: Racie, Lisa
APPLICANT: Racie, Lisa
APPLICANT: Racie, David
APPLICANT: Treacy, Maurice
APPLICANT: Frans, Cheryl
APPLICANT: Spaulding, Vikki
APPLICANT: Spaulding, Vikki
APPLICANT: Bownan, Michael
ITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES
ITLE OF INVENTION: BNCODING THEM
NUMBER OF SEQUENCES: 37
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.8%; Score 38.6; DB 1; Length 433;
51.4%; Pred. No. 0.028;
Live 0; Mismatches 84; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/664,596B
                                                                                1412 YYYYYYYYYYYYYYYYYYYYYYYGTACCAAA 1442
                                                   2074 CIGCACCIAGIITITICCCATIGGIICCAGA 2104
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87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Cambridge
STATE: Massachusetts
COUNTRY: U.S.A.
ZIP: 02140
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPA
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CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Brown, Scott A.
REGIGTRATION NUMBER: 32,724
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 896-8824
TELEPRAX: (617) 876-5851
INPORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 433 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: nucleic acid
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JS-08-664-596B-1
Sequence 1, Application US/08664596B
Patent No. 5807703
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Best Local Similarity 51.4<sup>§</sup>
Matches 89; Conservative
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CITY: C
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RESULT

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1456 TTACGAGTGTTAGAAGGCCATGAGGAATTGGTGCGTTGTATTCGATTTGATAACAAGAGG 1515
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Pred. No. 0.028;
0; Mismatches 84; Indels
PROTEINS AND POLYNUCLEOTIDES THEM
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McCoy, John
LaVallie, Edward
Racie, Lisa
Merberg, David
Treacy, Maurice
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       107 Grcanaacrrcricarggaraaraargrcrarrinrarrccaraggarirrgaagacgc 166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        167 CAGGACACGTTAATGGGACATGATGATGCTGTTAGTAAGATCTGTTGGCATGACAACAGG 226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1396 GIAGTGAGTGGCTCATCTGACACACTATCAGATTATGGGACATAGAATGTGGTGCATGT
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TITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES TITLE OF INVENTION: SECRETED PROTEINS AND POLYNUCLEOTIDES NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS: ADDRESSE: Genetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09156425B
Parent No. 5962671
Parent No. 5962671
Parent Norwariton:
APPLICANT: Baker, Brenda F.
APPLICANT: CAWSERT, Lax M.
TITLE COP. INVENTION: ANJERNSE MODULATION OF FAN EXPRESSION
FILE REFERENCE: RTS-0009
CURRENT FILING DATE: 199-09-18
NUMBER OF SEQ ID NOS: 47
                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PATEBLIA NOTES CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/738,367
FILING DATE:
FLIENG DATE:
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: BYOWN, SOCHT A.
REGISTRATION NUMBER: 32,724
TELECHOME: (617) 498-8224
TELEPAX: (617) 476-5851
INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
LENGTH: 733 base pairs
                                                                                                                                                                            ADDRESSEE: Genetics Institute, Inc. STREET: 87 CambridgePark Drive CITY: Cambridge STATE: Massachusetts COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-700S/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 733 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Homo sapiens FEATURE:
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LOCATION: (43)..(2766)
JS-09-156-425-1
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MOLECULE TYPE:
US-08-738-367-6
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LENGTH: 3380
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JS-09-156-425-1
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                                                                                                                                                                                                    1396 GTAGTGAGTGGCTCATCTGACAACACTATCAGATTATGGGACATAGAATGTGGTGCATGT
                                                                                                                   Gaps
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                    Length 3380;
          1.8%; Score 38.6; DB 2; Length 3:
51.4%; Pred. No. 0.11;
iive 0; Mismatches 84; Indels
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ITILE OF INVENTION: No. 6569662el Nucleic Acids and
ITILE OF INVENTION: No. 6569662el Nucleic Acids and
ITILE OF INVENTION: Polypeptides
File REFERENCE: 784CIP2B
CURRENT APPLICATION NUMBER: 05/09/620,312D
CURRENT APPLICATION NUMBER: 09/552,317
PRIOR FILING DATE: 2000-07-19
PRIOR FILING DATE: 2000-01-21
NUMBER OF EQ. ID NOS: 1105
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Patent No. 6569662
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LENGTH: 7518
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Query Match
Best Local Similarity 51.4*
Matches 89; Conservative
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John Tillinghast
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Best Local Similarity 53.5%
Matches 77; Conservative
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Chen, Rui-hong
Zhao, Qing A.
Wehrman, Tom
Xue, Aidong J.
Yang, Yonghong
Wang, Jian-Rui
Zhou, Ping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang, Y. Tom
Liu, Chenghua
Asundi, Vinod
Zhang, Jie
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: (1)..(7518)
US-09-620-312D-1051
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APPLICANT:
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1683 ATCAATTACATCTTTACAGTTTAG 1706

iearch completed: October 22, 2003, 21:59:58
Job time: 150 secs

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GenCore version 5.1.6

Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: October 22, 2003, 10:15:16; Search time 43 Seconds

1272.558 Million cell updates/sec

Title: US-09-601-168B-2

Perfect score: 3034
Sequence: 1 MDPAEAVLQEXALKFWNSSE.......PAAQAEPPRSPSRTYTYISR 569

Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 283308 seqs, 96168682 residues

Total number of hits satisfying chosen parameters: 283308
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Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Maximum DB seq length: 2000000000 Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : PIR_76:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

MET30 protein - ye sulfur controller-hypothetical prote hypothetical trp-a beta transducin-li WD repeat protein WD-40 repeat prote platelet-activation hypothetical prote hypothetical WD-re myosin-heavy-chain hypothetical prote WD-repeat protein WD-40 repeat regul beta-transducin re hypothetical prote WD-repeat protein probable sulfur me cell division cont P-box/WD-repeat pr WD-Yepeat protein WD-40 repeat prote WD-40 repeat prote WD-70 repeat protein WD-40 repeat protein serine/threonine k hypothetical prote hypothetical prote Description SUMMARIES T46660 T22703 S62507 T18521 T45136 AE1810 S56245 T43557 AC1842 AC2239 **I41075** % Query Match Length DB 545 531.5 513.5 513.5 513.5 455.5 455.5 139.5 336.5 336.5 378.5 373.5 373.5 373.5 361.5 Score 2597 1635.5 690 590.5 Result No.

Carcata at carcata	WD-40 repeat prote	CDC4 repeat unit-c	hypothetical prote	hypothetical prote	WD-40 repeat-prote	WD40-repeat protei	beta transducin-1	WD-repeat protein	WD-repeat protein	transcription init	apoptotic proteina	WD-repeat protein	WD-40 repeat prote	trp-asp repeat con	WD-40 repeat prote
G85034	AG1889	A56640	T19266	856893	AG2375	T51507	S76086	AE2415	AH2154	533263	T03818	AF1890	A12099	T41148	AG1837
N	7	7	7	~	~	7	7	7	7	~	~	~	~	7	7
333	934	422	376	714	786	876	1693	598	1189	704	1194	265	357	502	304
10.9	10.5	10.5	10.3	10.3	10.3	10.3	10.1	10.1	10.1	10.1	9.6	9.8	9.8	8.6	9.
330	320	318	313.5	312.5	312	312	307.5	306.5	306	305	299.5	298	297.5	297	296.5
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ALIGNMENTS

RESULT 1 B4808B NALternate names: beta-containing protein - African clawed frog NALternate names: beta-Trop NALternate names: beta-Trop NALternate names: beta-Trop NALternate names: beta-Trop NALternate names: beta-Trop NALternate names: beta-Trop NALternate names: beta-Trop NALternate names: beta-Trop C.Species: Xenopus laevis (African clawed frog) C.Species: Xenopus laevis C.Sacession: B48088 NO. C. Castanon, M.J. NO. Cell Biol. 13, 4953-4966, 1993 A.Title: Saccharomyces cerevisiae cdcl5 mutants arrested at a late stage in anaphase are A.Reference number: A48088; MUID:93330289; PMID:8393141 A.A.Accession: B48088 A.A.A.Residues: 1-518 < SPB A.Residues: aduplication C.Superfamily: unassigned WD repeat proteins; WD repeat homology C.Superfamily: who repeat homology <wdl> P.431-462/Domain: WD repeat homology <wdl></wdl></wdl>	Query Match Best Local Similarity 91.6%; Fred. No. 1.2e-193; Matches 488; Conservative 7; Mismatches 8; Indels 30; Gaps 1;	18 SSEREDCNNGEPERKIIPEKNSLRQTYNSCARLCINQETVCLASTAMKTENCVAKTKLAN 77 	78 GTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLK 137 	138 PMLORDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMV 1-97 	198 RIDSLWRGLAERRGWGOYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSL 257 	258 QRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIMDKNTLECKRILTGHTGSVLCLQYDE 317 	318 RVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRENNGMMYTCGKDRSIAVWDMASP 377 	378 TDITLRRVLVGHRAAVNVVDFDDKXIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQ 437
RESULT 1 Bet8088 Deta-transducin repe NiAlternate names: it Cipecies: Xenopus 1 Cipteres: Xenopus 1 Cipteres: 26-May-1994 CiAccession: B48088 Mollecule: Sacchrowny, AiReference number: AiAccession: B48088 AiReference number: AiRedeus; preliminaa AiRediues: 1-518 <	Query Mat Best Loca Matches	Qy Db	Qy Db	, qa	co da	Oy Db	Qy Db	QY QD

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVW--DMASPTD 379
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                          RESULT 3
70211
WD-repeat protein [imported] - fission yeast (Schizosaccharomyces pombe)
C;Species: Schizosaccharomyces pombe
C;Species: Schizosaccharomyces pombe
C;Date: 09-Jun-2000 #sequence_revision 09-Jun-2000 #text_change 02-Sep-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107 LEDPGIWKALYWQKGWPVNEWNVLNBFBAWRTHKFPQPRFENFLKQQNIIGPYGTMFLPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123 OMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183 TSDGMLWKKLI-----ERMVRTDSLWRG-------LAERRGWG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 KNVVSKVSDLTSCSDFSTSSPVPCLNPLS--------HENNRIDLIRDLLA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     214 QYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRS
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A;Experimental source: strain Bristol N2
C;Genetics:
C;Genetics:
A;Gene: CESP:K10B2.1
A;Introns: 78/3; 125/1; 183/2; 281/3; 404/3; 551/3; 668/3
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YRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDL 497
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                                                                                                                                                                                                                                                                                                                                  hypothetical protein K10B2.1 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Sacession: T16607
R;Miller, N.
Submitted to the BMBL Data Library, June 1995
A;Description: The sequence of C. elegans cosmid K10B2.
A;Reference number: Z18545
A;Accession: T16607
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-701 <MIL>
                                           403 YRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81 SMIVPKOR----KLSASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SPLFPSRNTQIFLSYSRSFSBYL----KWSBHEQLDFMDKIVHRLSHYQLGKVDNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               136 LKPMLORDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                167 NVRSDSLWWGLSEKRQWDKFLNISRDMSVRRICEKFNYDVNIKRDKLDQLILMHVFYSKL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVW
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                                                                                                                                                               VAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31 RKIIPEKNSLRQTYNSCARLCLNQETVCLASTAMKTENCVAKTKLAN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SHDDTILIWDFLNDPAAQAEPPRSPSRT 563
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167; Conservative
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Best Local S:
Matches 167
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                                                                        A,Cross-references: EMBL:294864; PIDN:CAB08168.1; GSPDB:GN00066; SPDB:SPACS7A10.05c
A;Experimental source: strain 972h-; cosmid c57A10
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WRT30 protein - yeast (Saccharomyces cerevisiae)

W.Alternate names: protein Y1905.02; protein Y10046w
C; Saccharomyces crevisiae
C; Saccharomyces crevisiae
C; C; Accession: $49932; $43750
C; Accession: $49932; S43750
Submitted to the EMBL Data Library, December 1994
A; Reference number: $49931
A; Recession: $49932
A; Rollecule type: DNA
A; Residues: 1-640 < ODE:
A; Residues: 1-640 < ODE:
A; Residues: 1-640 < ODE:
A; Residues: 1-640 = EMBL Data Library, December 1993
A; Rollecule type: DNA
A; Cross-references: GB: Z47047; EMBL: Z46861; NID: g603997; FID: g763300; MIPS: Y1L046w
B; Thomas, D.; Cherest, H.; Barbey, R.; Surdin-Kerjan, Y.
A; December 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  264 ---CRQVVLSGHSDGVMCLQLVRNILASGSYDATIRLWNLATFQQVALLEGHSSGVTCLQ 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       315 YDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDM 374
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      433 IACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKI 492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37 VQSLALADSRLFSCSLDGTIKQWDIEKKKCVHTLFGHIEGVWEIAADHLRLISGAHDGVV 496
                                                                                                                                                                                                                                                                                                                                                            46 SSM----HNELSGLSBKSRQRVEAVWAAFSEASCSERKLALQGILNNCSSSLLSFASSTL 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            212 DYPISSNEETISSVKPPSPNSDSKFFLPFKTRPWKEVYAERCR----VECNWRHGR---- 263
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                                                                                                                                                                                                                                                                                                                                                                                                                                    137 KPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERM
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                                                                                                                                                                                                                                                                                                               80 SSMIVPKORKLSASYEKEKELCVKYFEQWSE---SDQVEFVEHLISQMCHYQHGHINSYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     158 INRK-----CEKCGWGLPLLERNTLYAAKASIQKRYERLTKRGVDQAHESSPVKKAKLD
                                                                                                                                                                                                                               DB 2; Length 605;
                                                                                                                                 %;Gene: SPDB:SPAC57A10.05c
%;Map position: 1
3;Superfamily: unassigned WD repeat proteins; WD repeat homology
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A.Accession: S43750
A.Recoule type: DNA
A.Residues: 1-60,11,62-640 <THO>
A.Cross.references: EMBL:L26505; NID:g432493; PID:g432494
                                                                                                                                                                                                                        Query Match
19.5%; Score 590.5; DB 2;
Best Local Similarity 29.0%; Pred. No. 8.6e-38;
Matches 156; Conservative 86; Mismatches 189;
4;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               197 VRTDSLWRGLAERRGWGQYLFKN---
                              A, Molecule type: DNA
A, Residues: 1-605 <BAD>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---GWGQYLFKNK-----PPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQ 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDM 374
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                                                                                                                                                                                                                                                                                                                                                                                  92 ASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPAR 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     259 RIHCRSETSK----GVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQ 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              237 PNCGWGLPLLHMKRARIQQNSTGSSSNADIQTTRPWKVIYRERFKVESNWRKG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               350 FDDRKLITGSLDKTIRVWNYITGECISTYRGHSDSVLSVDSYQKVIVSGSADKTVKVWHV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            410 ESRICYILR----GHTEWVNCVKLHPKSFSCFSCSDDTITRMWDIRINSCLKVFRGHVGQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               526 LSCGLDNTIKLWDVKTGKCIRTQFGHVEGVWDIAADNFRIISGSHDGSIKVWDLQSG---
                                                                                                                                                                                                                                                                                                                                  LPEYNFTKFCYRHNPDIQFSPTHTACYKQDLKRTQEINANIAKLPLQEQSDIHHIISKYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           375 ASPIDITLRRVLVGHRAAVNVVDFDDKYI--VSASGDRTIKVWNTSTCEFVRTLNGH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   466 VQKIIPLTIKDVENLATDNTSDGSSPQDDPTMTDGADESDTPSNEQETVLDENIPYPTHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----DNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDP
                                                                                                                                                                                                                                                                                     34 IPEKNSLROTYNSCARLCLN-QETVCLASTAMKTENCVAK-TKLANGTSSMIVPKQRKLS
                                                                                                                                                                                     18.0%; Score 545; DB 4; DCD-2...
28.9%; Pred. No. 3.2e-34;
Live 85; Mismatches 202; Indels 124;
                                                    repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sulfur controller-2 protein [imported] - Neurospora crassa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            504 RAPAGTLCLRTLVEHSGRVFRLQFDBFQIVSSSHDDTI 541
                                                    ΜD
A,Cross-references: SGD:S0001308; MIPS:YIL046w
A,Map position: 9L
C:Superfamily: unassigned WD repeat proteins; P
F;298-329/Domain: WD repeat homology <WD2>
F;338-369/Domain: WD repeat homology <WD2>
F;374-409/Domain: WD repeat homology <WD2>
F;417-450/Domain: WD repeat homology <WD3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        430 KRGIACLQYRD--RLVVSGSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Map position: 3
A; Introns: 75/3; 319/1; 354/1
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hypothetical trp-asp repeat-containing protein - fission yeast (Schizosaccharomyces pomb C;Species: Schizosaccharomyces pomb C;Accession: 138502, 862507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se2507 Se250
                                       72 KTKLANGTSSMI------VPKQRK--LSASYEKEKEL-----CVKYFEQWSESDQVE 115
                                                                                                                                                                             116 FVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELV 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          255 QIHDDVLVTGSDDNTLKVWCIDKGEVMYTLVGHTGGVWTSQISQCGRYIVSGSTDRTVKV 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            392 AVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDR--LVVSGSSD 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  --YIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIEC 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143 SKNWKLISEIDKIWKSLGVEEFKHHPDPTDRVTGAWQGTAIAAG------VTIPDHIQP 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDLNVHRFLKLQKFGDIFERAADKSRYLRADKIEKNWNANPIMGSAV-LRGHEDHVITCM 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OYDDOKIVSGLRDNTIKIWDKNTLECKRILIGHTGSVLCLOYDE--RVIITGSSDSTVRV 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRA 391
                                                                                                                                                                                                                            ESSYSNGSSSSYNADKLSSSRPLQHKLDLSASPSRNNDLNPRVEHLIALFKDLSSAEQMD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     450 NTIRLWDI----ECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             286 DNTIKIWDKNTLECKRILIGHTGSVLCLQYDER--VIITGSSDSTVRVWDVNTGEMLNTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               344 IHHCEAVLHLRFNNGMMVTCSKDRSIAVW--DMASPTDITLRRVLVGHRAAVNVVDFDDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FGHTDNVLGVVVSENYIISSSRDHTARVWRLDATSPAEACM-HVLRGHLASVNSVQYSSK
                                                                                                                                                                                                                                                                                                               CKEWYRVTSDGMLWKKL-IERMV------RTDSLWRGLAERRGWGQYLFKNKPPDGNAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PN-SFYRALYPKIIQDI------ETIESNWRCGRHSLQRIHCRSETSKGVYCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
17.1%; Score 519.5; DB 2; Length 26
Best Local Similarity 38.0%; Pred. No. 8.8e-33;
Matches 104; Conservative 58; Mismatches 93; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           507 AGTLCLRTLVEHSGRVFRLQ-FDEFQIVSSSHDDTILIWD 545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      484 EGT-CVHMLSGHRSAITSLQWFGRNMVATSSDDGTVKLWD 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                 228
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                                                                               the
C;Function:
A;Description: negatively regulates sulfur structural gene expression
A;Note: scon-2+ expression is dependent on CYS3 function and the binding of CYS3 to C;Superfamily: unassigned WD repeat proteins; WD repeat homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17;
                                                                                                                                                                                                                                              11;
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A;Cross-references: EMBL:Z79757; PIDN:CAB02129.1; GSPDB:GN00023; CESP:F55B12.3
A;Experimental source: clone F55B12
                                                                                                                                                                                                                                                                                                                                                                                                                                             KEWYRVTSDGMLWKKLIERMVRIDSLWRGLAERRGWGQYLFKNKP-----P 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | : | | : | | ; | | ; | | | KLWDLDTRQVIRTYEGHVQVLILPPEYEPDEEVLNGASQDNQDAMSVSSGGSGSPS 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----GSSD 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              498 MSHAQIERAGSPGSHSSSHNLLPSSLPSGDEDVRHLYGSAFVADESRPLPPRYFMTGGLD 557
                                                                                                                                                                                                                                                                                                                                                                         LOGILSQLCFPQLSFVSREVNEALKIDFISALPV----ELAOKVLCYLDTVSLTKAAQVS 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                209 QGRVTELADSHDSQDRSVNQHGKRPAAEAEEEDPIKKRQCMAAAEASKAVTQPKTRSWKA 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       295 NILECKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLR 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322 ETEECIRTLVGHTAGIRALQFDDSKLISGSLDHTIKVWNWHTGECLSTFAAHTDSVISVH 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGT 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----PRSG 608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269 VY----RDRWQVSYNWKNSRYKLSVL---KGHENGVTCLQLDDNILATGSYDTTIKIWNI 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein F55B12.3 - Caenorhabditis elegans
C.Species: Caenorhabditis elegans
C:Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
C;Accession: T22703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : | : | : | : | ORWRILADSDAVWVRMCEQHVNRK-----CTKCGWGLPLLERKKLRNYTRQRQLAKGGP
                                                                                                                                                                                                                                                                                                           117 VEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   223 DGNA------PPNSFYRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KVWNTSTCEFVRTLNGHKRGI--------ACLQYRDRLVVS-----
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Introns: 22/3; 45/2; 77/3; 122/3; 171/2; 211/2; 342/2; 417/3; 478/3;
                                                                                                                                                                      Query Match 17.5%; Score 531.5; DB 2, Length 650; Best Local Similarity 25.0%; Pred. No. 3.6e-33; Matches 144; Conservative 76; Mismatches 180; Indels 177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         70;
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17.1%; Score 520; DB 2; Length 579
Best Local Similarity 28.8%; Pred. No. 2.4e-32;
Matches 150; Conservative 78; Mismatches 222; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | | | | | : : | | | | : KCDATYTGHCGPVTCVGLSDSLMASGSEDGTIRLHSF 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 510 LCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDF 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     submitted to the EMBL Data Library, September 1996 A;Reference number: 219602 A;Accession: T22703 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Residues: 1-579 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A, Gene: CESP: F55812.3
A, Map position: 5
A, Introws: 22/3; 45/2:
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A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Molecule type: DNA A;Rosidues: 1-75 KMBL: 1768391; PIDN:CAA69671.1 A;Experimental source: EMBL: 1972 A;Experimental source: strain h- 972 R;Wood, V.; Rajandream, M.A.; Barrell, B.G.; Devlin, K.; Churcher, C.M. submitted to the EMBL Data Library, March 1998 A;Reference number: Z21842 A;Accession: T40157, translated from GB/EMBL/DDBJ	A; Residues: 1-775 < WOO. A; Residues: 1-775 < WOO. A; Residues: 1-775 < WOO. A; Residues: 1-775 < WOO. A; Residues: 1-775 < WOO. A; Residues: EMBL; AL022103; PIDN: CAA17898.1; GSPDB:GN00067; SPDB: SPBC2G2.18 A; Reterics: EMBL; Alone: SPBC2G2.18 A; Map position: 2 A; Map position: 2 A; Note: Popt+ Ouery Match 14.9%; Score 453; DB 2; Length 775; Best Local Similarity 25.8%; Pred. No. 5.8e-27; Best Local Similarity 25.8%; Pred. No. 5.8e-27; Matches 162; Conservative 86; Mismatches 229; Indels 150; Gaps 20; QY OVERALKENNSSEREDC	GNDSKTRQSFPHSS EQWSESDOVEFVEHL	301 LTGPPAEITNLYLTHLDAPGLCAVSQVSHHWYKLVSSNBELWKSLFLKDGFFWDSI 194 ERMVRIDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRGG 357 DSKIRTMCLBQSLSACAIMKRVYFRHFNLRERW 254 RHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKWTLECKRILTGHTGSV	DD 390 LHAPEKIKRCSFPIHGVRLITKLQFDDDKIIVSTCSFRINIYDTKTGVLIRBLEEHEGDV 449 QY 311 LCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMNVTCSKDRSIA 370 (A	Db 553 NPDQNNDFTSATTNPFYIRTLRGHTDSVREVACLGDLIVSASYDGTLRVWKASTGVC 609 Qy 463 LRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSG 520 [RESULT 11 AE1810 WD-40 repeat protein [imported] - Nostoc sp. (strain PCC 7120) C;Species: Nostoc sp. PCC 7120 A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120
	PESULT 9 T18521 Deta transducin-like protein - Podospora anserina C; Species: Podospora anserina C; Species: Podospora anserina C; Species: Podospora anserina C; Species: Podospora anserina C; Species: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C; Accession: T18521 R; Saupe, S; Turcq, B; Begueret, J. R; Saupe, B; Turcq, B; Begueret, J. R; Saupe, B; Turcq, B; Begueret, J. R; Saupe, B; Turcq, B; Saupe, B; Turcq, B; Saupe, B; Turcq, B;	Query Match 15.0%; Score 455.5; DB 2; Length 1356; Best Local Similarity 31.7%; Pred. No. 8.2e-27; Matches 121; Conservative 64; Mismatches 131; Indels 66; Gaps 15; Qy 226 APPNSFYRALYPKIIQDIETIESNWRCGRHSL	265ETSKGVYCLQYDOKIVSGIRDNTIKIWDKNTLECKRIL	2y 361 VTC-SKORSIAVWOWASPIDITLARYLVGHRAANVVDPDDKY1VSASGBRITKWNT 417 Db 982 VASGSGBKTIKIWDTASGTCTQTLECHGGSVWSVAFSPDGGRVASGSDBKTIKIWDT 1038 Qy 418 STCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLECHEBLVRC 475 1039 ASGTCTQTLECHGGWVQSVVFSPDGGRVASGSDDHTIKIWDAVSGTCTQTLECHGDSVWS 1098 Qy 476 IRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQ 531 Db 1099 VAFSPDGGRVASGSIDGTIKIWDAASGT-CTQTLECHGGWVHSVAFSPDGQR 1149	Oy 512 IVSSSHDDTILIMDFLANDPAQ 553	nvolved in mai

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A;Residues: 1-779 <MUW>
A;Coss-references: EMBL:D31600; NID:g836814; PIDN:BAA06495.1; PID:d1007066; PID:g836815
C;Genetics:
                                                                                    PIDN: BAA09229.1; PID: d1009870; PID: g836745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           spindle pole bodies
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          336 TGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ------HVFKGHNSTVRC 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----STCE----FVRTLNG 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HKRGIACLOYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRPDN--KRIVSG 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LCAAELVCKEWYR-VTSDGMLWKKLI--ERMVRTDSLWRGLAERRGWGQYLFKNKPPDGN 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----SPKGF 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPNSFYRALYPKIIQD-----IET--IESNWRCGRHSLQRIHCRSETSKGVYCLQYD 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NSLNLKLSQKYPKLSQQDRLRLSFLENIFILKOWYNPKFVPQRTTLRGHMTSVITCLQFE 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOKIVSGLRDNTIKIMDKNTLECKRILIGHTGSVLCLQYDE-RVIITGSSDSTVRVWDVN 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNYVITGADDKMIRVYDSINKKFLLQLSGHDGGVWALKYAHGGILVSGSTDRTVRVWDIK 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AYDGKIKVWDL------VAALDPRAPAGTL--CLRTLVEHSGRVFRLQFDEFQIVSS 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109 SESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56 TVCLASTAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEK-----ELCVKYFEQW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       194 TIPLAKTIKTINN -----NNNIADLIESKOSIISPEYLSDEIFSAINNNIPHAYFK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A,Gene: SGD:CDC4
A,Cross-references: SGD:S0001885; MIPS:YFL009w
A,Map position: 6L
C;Function: A,Description: initiation of DNA replication; separation of the :
C,Superfamily: unassigned WD repeat proteins; WD repeat homology C,Keywords: cell cycle control
F,459-494/Domain: WD repeat homology <WD1>
F,628-659/Domain: WD repeat homology <WD2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
13.2%; Score 399; DB 2; Length 779;
Best Local Similarity 24.3%; Pred. No. 9.1e-23;
Matches 139; Conservative 80; Mismatches 196; Indels 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    396 VDFDD----KYIVSASGDRTIKVWNT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IINSLGVSQNWNKIIRKSTSLWKKLLISENFV
                                  A;Residues: 1-779 <MUR>
A;Cross-references: EMBL:D50617; NID:g836685; R;Churcher, C.
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NyAleernate names: protein YPTU09w

NyAleernate names: protein YPTU09w

C;Species: Saccharomyces cerevisiae

C;Date: 02-Sep-1995 #sequence_revision 12-Apr-1996 #text_change 26-May-2000

C;Accession: SS6245; S48310; A26867; B. S6304

R;Murakani, Y.; Naitou, M.; Hagiwara, H.; Shibata, T.; Ozawa, M.; Sasanuma, S.I.; Sasanu submitted to the EMBL Data Library, May 1995

A;Description: Analysis of the nucleotide sequence of chromosome VI from Saccaromyces ce A;Accession: S56146
C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Dec-2002
C;Accession: Asbisso
C;Accession: Asbisso
R;Kaneko; T: Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguchi
Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S
DNA Res. B, 205-213, 2001
A;Rille: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana
A;Reference number: AB1807; WUID:21595285; PMID:11759840
A;Status: preliminary
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22;
                                                                                                                                                                                                                                                                                                                                                    A;Residues: 1-1227 «KUR»
A;Cross-references: GB:BA000019; PIDN:BAB77553.1; PID:g17135007; GSPDB:GN00179
A;Experimental source: strain PCC 7120
C;Genetics:
A;Gene: alro029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 ISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKOKPPDGNAPPN--SFYRALYPK 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RQIQERLILEPVKQKLINIFGTELELHERRMIGTLQKEPLPKKGYAAGNLINLERQLQLD 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     239 IIQDIETIESN------WRCGRHSL---QRIHCRS-----ETSKGVYCLQY--D 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   277 DQKIVSGLRDNTIKIWDKNTLECKRILIGHTGSVLCLQY--DERVIITGSSDSTVRVWDV 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GKYFATGLMNGEIRLWQTSDNKQLRIYKGHTAWVWAFAPFSPDSRMLASGSADSTIKLWDV 673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NTGEMINTLIHHCEAVLHLRF.-NNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAA 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HIGECLKILSKNINKVYSVAFSPDGRILASASODOTIKLWDIATG---NCOOTLIGHDDW 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VNVVDF----DDK--YIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYR--DRLVV 444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SSGEDSTVRLWDVKTGQCWQIFEGHSKKVYSVRFSPDGQTLASCGEDRSIKLWDIQRG-- 848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EKKVMYSLGANREYVSFRELKDDWLTTESPIKVMEALBSLLR------RSLIBKASPTLI 431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ------INTY--PLMK------4RSLDYI-------493
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13.6%; Score 413.5; DB 2;
Best Local Similarity 23.9%; Pred. No. 1.3e-23;
Matches 140; Conservative 114; Mismatches 208;
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DD 589 SMDTTIRIWDLENIWNNGECSYATNSASPCAKILGAMYTLOGHTALVGLLRLSDKFLVSA 648 27 536 SHDDTILIWDFLNDPAQAEPPRSPSRTYTY 566 DD 649 AADGSIRGWD-ANDYSRKFSY 668	RESULT 13 143557 F-box/WD-repeat protein pop2 - fission yeast (Schizosaccharomyces pombe) NyAlternate names: proteinlysis factor sudip C;Species: Schizosaccharomyces pombe C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jul-2000 C;Species: Schizosaccharomyces pombe C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jul-2000 C;Accession: T43557; T43798 R;Wolf, D.A.; Jackson, P.K. submitted to the EMBL Data Library, December 1997 A;Description: Fission yeast pop2 encodes a novel F-box/WD-repeat protein involved in the A;Schaus: preliminary; translated from GB/EMBL/DDBJ A;Schaus: preliminary; translated from GB/EMBL/DDBJ A;Residues: 1-703 awQL> A;Cross-references: EMBL:AF038867; PIDN:AAB95480.1	AC4D7.03 Ruml proteins fc 293383	A; Description: required to prevent spontaneous re-replication Query Match Query Match Best Local Similarity 23.3%; Pred. No. 1.2e-22; Matches 146; Conservative 92; Mismatches 226; Indels 163; Gaps 25; Qy 14 KFWNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNOETVCL 59; Db

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WD-40 repeat protein [imported] - Nostoc sp. (strain PCC 7120)
C, Species: Nostoc sp. PCC 7120
A,Note: Nostoc sp. PCC 7120
A,Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120
C,Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Dec-2002
C,Accession: AC1842
R,Raneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Matanabe, A.; Iriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S. Natie: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana A;Reference number: AB1807; MUID:21595285; PMID:11759840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
A;Status: preliminary
A;Molecule type: DNA
A;Mesidues: 1-1747 <MUR>
A;Cross-references: GB:BA000019; PIDN:BAB77807.1; PID:g17135261; GSPDB:GN00179
A;Experimental source: strain PCC 7120
C;Genetics:
A;Gene: all0283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         276 DDQKIVSGLRDNTIKIWDKNTLECKRILIGHTGSVLCLQY--DERVIITGSSDSTVRVWD 333
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1045 NQYLATGGDDSVVRLWDIGKGVCVRTFSGHTSQVICILFTKDGRRMISSSSDRTIKIWN 1103
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32.7%; Pred. No. 2.1e-20;
Live 50; Mismatches 107; Indels
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Best Local Similarity 32.7%;
Matches 84; Conservative
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CHARACTERIZATION.
MEDDINEs914464; PubMed=9990852;
Minston T., Strack P., Beer-Romero P., Chu C.Y., Elledge S.J.,
Minston J.W.;
"The SCF(beta-TRCD)-ubiquitin ligase complex associates specifically
with phosphorylated destruction motifs in I-kappa-B-alpha and
beta-catenin and stimulates I-kappa-B-alpha ubiquitination in vitro.";
Genes Dev: 13;270;283(1999).
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MEDLINE=22072105; PubMed=12077367;
Sadot E., Conacci-Sorrell M. A., Ahurinsky J., Shnizer D., Lando Z.,
Sharhary D., Kam Z., Ben-Ze'ev A., Geiger B.;
"Regulation of S33/S37 phosphorylated beta-catenin in normal and
transformed cells."

d. Cell. Set. 115.3771-278072002).
d. Cell. Set. 115.3771-278072002).
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16-0CT-2001 (Rel. 40, Last sequence update)

15-SEP-2003 (Rel. 42, Last annotation update)

15-SEP-2003 (Rel. 42, Last annotation update)

15-SEP-2003 (Rel. 42, Last annotation update)

15-SEP-2003 (Rel. 42, Last annotation update)

15-SEP-2003 (Rel. 42, Last annotation update)

15-SEP-2003 (Rel. 42, Last annotation update)

15-SEP-2003 (Rel. 40, Last annotation update)

15-SEP-2003 (Rel. 40, Last annotation update)

15-SEP-2003 (Rel. 40, Last annotation update)

16-SEP-2003 (Rel. 40, Last annotation update)

16-SEP-2003 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. (ISOFORM 1).
MEDLINE=99075339, PubMed=9859996,
Maron A., Hatzubai A., Davis M., Lavon I., Amit S., Manning A.M.,
Andersen J.S., Mann M., Mercurio F., Ben-Neriah Y.;
"Identification of the receptor component of the IkappaBalpha-
                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. (ISOFORM 2).
MEDLINE-20003060; PubMed=10531035;
Cenciarelli C., Chiaur D.S., Guardavaccaro D., Parks W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Identification of a family of human F-box proteins."; Curr. Biol. 9/1177/1179(1999).
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               APAP_RAT
TU11_GCHPO
APAF MOUSE
GBLP BRANA
APAF HUMAN
GBLP ARATH
TZD4_YEAST
TUP1_YEAST
TUP1_YEAST
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FW1A_HUMAN
   Q00808 podospora a P87060 schizosacch P07834 saccharomyc O14170 schizosacch P90648 dictyosteli
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Q93794
P53699
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OBYTC2
OBYV57
P43034
P43035
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Q00659
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                 GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                      hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                    127863 segs, 47026705 residues
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TRCB XENLA
FWIB HUMAN
LI23 CAEEL
POFF SCHPO
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YY46 ANASP
YSOO ANASP
YL24 ANASP
LISI HUMAN
LISI MOUSE
LISI BOVIN
                                                                                                             October 22, 2003, 10:07:11;
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KMHA_DICDI
FBW2_HUMAN
WDS_DROME
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T2D4_DROME
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FW1B_HUMAN
LI23_CAEBL
POFB_SCHPO
POFI_SCHPO
SCOB_EMENI
MT30_YEAST
SCO2_NEUCR
SCO2_NEUCR
SCO2_NEUCR
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Maximum Match 100%
Listing first 45 summaries
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                                                                                - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Match Length DB
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Vidal M.,

204

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564 600

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421 VLVGHRAANNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVV 480
                          PKORKLSASYEKEKELCVKYFEOWSESDOVEFVEHLISOMCHYOHGHINSYLKPMLORDF 180
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MATURED COCYTES, THE LEVEL CHANGE VERY LITTLE EVEN AFTER ZYGOTIC
GENE TRANSCRIPTION BEGINS FOLLOWING THE MIDBLASTULA TRANSITION. DO
                                                                                                      GLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRS
                                                                                                                                                                                                        241 GLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRS
                                                                                                                                                                                                                                                         ETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILITGHTGSVLCLQYDERVIITGS
                                                                                                                                                                                                                                                                                                     ETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDERVIITGS
                                                                                                                                                                                                                                                                                                                                                                              SDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMAVTCSKDRSIAVWDMASPTDITLRR
                                                                                                                                                                                                                                                                                                                                                                                                                                           VLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAQAEPPRSPSRTY
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                                                                         ITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMVRTDSLWR
                                                                                                                                                                                                                                                                                                                                                 SDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASPTDITLRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SKP1-CULLIN-F-BOX) PROTEIN LIGASE COMPLEX
    SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SPECIAL STREET, B.D., Stratowa C., Castanon M.J.;

Speckak W., Kelper B.D., Stratowa C., Castanon M.J.;

Saccharomyces cerevisiae cdcl5 mutants arrested at a late stage in anaphase are rescued by Xenopus cDNAs encoding N-ras or a protein with beta-transducin repeats.";

Mol. Cell. Biol. 13:4953-4966(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  differential display PCR.";
Dev. Genet. 19:190-198(1996)
-!- FUNCTION: Probably recognizes and binds to some phosphorylated proteins and promotes their ubiquitination and degradation. May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia; Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hudson J.W., Alarcon V.B., Elinson R.P.; "Identification of new localized RNAs in the Xenopus occyte by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              091854; P70037; P70038;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Beta-TrcP (Bera-transducin repeat-containing protein).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 participate in Wnt signaling.
SUBUNIT: PART OF A SCF (SKP1-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=97109804; PubMed=8952061;
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box protein) ubiquitin ligase complex, which mediates the ubiquitination of proteins involved in cell cycle progression, signal transduction and transcription. Regulates the stability of CTNNB1 and participates in Wnt signaling.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                       PATHWAY: Ubiquiting conjugation, third step.
SUBUNIT: Interacts directly with SKP1 in the SCF complex.
Interacts specifically with phosphorylated CINNB1 and NFKBIA, ubiquitination substrates.
SUBCELLULAR LOCATION: Cytoplasmic.
ALTERNATIVE PRODUCTS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50181; FBOX; 1.
PROSITE; PS00678; WD_REPEATS_1; 6.
PROSITE; PS50082; WD_REPEATS_2; 7.
PROSITE; PS50294; WD_REPEATS_REGION; 1.
Ubl conjugation pathway; Ligase; Wnt signaling pathway; Repeat;
WD_repeat; Alternative splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIM, 603482, -
G0, G0:0004840; F:ubiquitin conjugating enzyme activity; TAS.
G0; G0:0001462; P:signal transduction; TAS.
G0; G0:000511; P:ubiquitin-dependent protein catabolism; TAS.
INTECPEO; IPR001810; P-box.
InterPEO; IPR001880; WD40.
Pfam; PF00646; F-box; 1.
Pfam; PF00646; F-box; 1.
PFNNTS; PR00320; GRROTEINRPT.
ProDom; PD000018; WD40; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99.1%; Score 3006; DB 1; Length 605; 94.0%; Pred. No. 8.6e-220; ive 0; Mismatches 0; Indels 30
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WD 2.
WD 4.
WD 6.
WD 6.
WD 7.
Missing (in isoform 2).
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                                                                                                                                                                                                                                     Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                        Isoid=Q9Y297-2; Sequence=VSP_006764; SIMILARITY: Contains 1 F-box domain. SIMILARITY: Contains 7 WD repeats.
                                                                                                                                                                                                                                                                            IsoId=Q9Y297-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MDPAEAVLQEKALKFM-------
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F-BOX
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; Y14153; CAA74572.1; -. EMBL; AP129530; AAF04464.1; -. Genew; HGNC:1144; BTRC.
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es 569; Conservative
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SMART; SM00320; WD40; 7
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343 TDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVMNTSTCEFVRTLNGHKRGIACLQ 402
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Kotani H., Nomura N., Ohara O.;
"prediction of the coding sequences of unidentified human genes. X.
The complete sequences of 100 new cDNA clones from brain which can
code for large proteins in vitro.";
DNA Res. 5:169-176[1988].
-! FUNCTION: Probably recognizes and binds to some phosphorylated
proteins and promotes their ubiquitination and degradation. May
participate in Wht signaling.
-!- SUBUNIT: PART OF A SCF (SKPI-CULLIN-F-BOX) PROTEIN LIGASE COMPLEX.
-!- SUBUNIT: PART OF A SCF (SKPI-CULLIN-F-BOX) PROTEIN LIGASE COMPLEX.
-!- ALTERNATIVE PRODUCTS;
                                                                             YRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDL
                                                                                                                                                                                                                                                                                                   FWIE HUMAN STANDARD;

QUUREL, QSPSS8; QSPS29; QSV4C6;

QUUREL, QSPSS8; QSPS209; QSV4C6;

16-OCT-2001 (Rel. 40, Last sequence update)

15-SEP-2003 (Rel. 42, Last annotation update)

15-SEP-2003 (Rel. 42, Last annotation update)

Fbox/WD-repeat protein 18 (F-box and WD-repeats protein beta-TrCP2)

FBXWIB OR FBWIB OR BTRCP2 OR KIAA0696.
                                                                                                                                                            Σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa; Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBL_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Koike J., Sagara N., Kirikoshi H., Takagi A., Miwa T., Hirai M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Molecular cloning and genomic structure of the betaTRCP2 gene chromosome 5q35.1.";
Biochem. Biophys. Res. Commun. 269:103-109(2000).
                                                                                                                                        VAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cenciarelli C., Chiaur D.S., Guardavaccaro D., Parks W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Identification of a family of human F-box proteins."; Curr. Biol. 9:1177-1179(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Event=Alternative splicing; Named isoforms=3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isold=Q9UKB1-2; Sequence=VSP_006765;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IsoId=Q9UKB1-3; Sequence=VSP 006766;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Name=C;
Isold=Q9UKB1-1; Sequence=Displayed;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY: Contains 1 F-box domain. SIMILARITY: Contains 7 WD repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Fetal lung;
MEDLINE=20160458; Pubmed=10694485;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=10531035;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Brain;
MEDLINE=98403880; PubMed=9734811;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=20003060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Name=A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Name=B
                                                                                                                                        498
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                                               438
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                                                                                                                                                                                                                                                                                 FW1B_HUMAN
                                                                                                                                                                                                                                                                                                                              8
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                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRIIKVWNTSTCEFVRTLNGHKRGIACLQ 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43 GTSSMIVPKQRKLSANYEKERELCVKYFEQWSBCDQVEFVBHLISRMCHYQHGHINTYLK 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     QRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDE 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASP 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RVIIIGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASA 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   78 GTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLK 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMV 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    103 PMLQRDFITALPARGLDHIAENILSYLDAKSLCSAELVCKEWYRVTSDGMLWKKLIERMV 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42
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                                                                                                                                                                                                                                                                                                                                                R EMBL; U63921; AAB49671.1; -
R EMBL; U63921; AAB49671.1; -
R PTR; B48088; B48088.
R InterPro; IPR001810; F-box.
InterPro; IPR001810; F-box.
InterPro; IPR001810; F-box.
InterPro; IPR001810; MD40.
R Pfam; PF00400; WD40; 7.
R PRINTS; PR00320; GPROTEINBRPT.
R PROMOTE, PR00018; WD40; 7.
R PROSTE; PS00018; WD REPEATS 1; 6.
R PROSTIE; PS0002; WD_REPEATS 2; 7.
R PROSTIE; PS00024; WD_REPEATS 2; 7.
R PROSTIE; PS00024; WD_REPEATS 2; 7.
R PROSTIE; PS00034; WD_REPEATS 2; 7.
R PROSTIE; PS00034; WD_REPEATS 2; 7.
R PROSTIE; PS00034; WD_REPEATS 2; 7.
R PROSTIE; PS00034; WD_REPEATS 2; 7.
R PROSTIE; PS00034; WD_REPEATS 2; 7.
R PROSTIE; PS00034; WD_REPEATS 3; 6.
R PROSTIE; PS00034; WD_REPEATS 3; 6.
R PROSTIE; PS00034; WD_REPEATS 3; 7.
R PROSTIE; PS00034; WD_REPEATS 3; 7.
R PROMAIN 119 157 F-BOX.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRVLMGHTGSVLCLQYDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 ASEREDCHRDEPPRKITTEKNTURQ-----TKLAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RTDSLWRGLABRRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSL
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    INCREASE IN ABUNDANCE IN THE GASTRULA, NEURULA, TAILBUD,
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Pred. No. 6e-189;
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WD 2.

WD 3.

WD 4.

WD 5.

WD 6.

WD 7.

GEM -> BER (IN REF. 2).

GLA -> AAH (IN REF. 2).
                                            SIMILARITY: Contains 1 F-box domain.
SIMILARITY: Contains 7 WD repeats.
SIMILARITY: STRONG, TO C.ELEGANS K10B2.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   59507 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tch 85.6%; al Similarity 91.6%; 488; Conservative
                                                                                                                                                                                                                                                                                                                                 EMBL; M98268; AAA02810.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    302
302
516
518 AA;
                           TADPOLE EMBRYO
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Best Local 8
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EMBL; AF275253; AAG28037.1; -.
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Pfam; PF00400; WD40; 7.
                                                                                                                                                                                                                      Caenorhabditis elegans.
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. STRAIN-Bristol N2;
                                                                                                                                                                                                                                                      NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           levels.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 S--TAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVE 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119 HLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDH1AENILSYLDAKSLCAAELVCKE 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94 HLISRMCHYQHGHINSYLKPMLQRDFITALPEQGLDHIAENILSYLDARSLCAAELVCKE 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     239 IIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLE 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CKRILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNG 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         332 LMVTCSKDRSIAVWDWASATDITLRRVLVGHRAAVNVVDFDDKXIVSASGDRTIKVWSTS 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TÇEFVRTINGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRF 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDPABAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       212 IIQDIETIESNWRCGRHNLQRIQCRSENSKGVYCLQYDDEKIISGLRDNSIKIWDKTSLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            179 WYRVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPK
                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                              PROSITE; PS5018, H780X; 1.

PROSITE; PS500678; WD REPEATS 1; 5.

PROSITE; PS5006294; WD REPEATS 2; 7.

PROSITE; PS500294; WD REPEATS 2; 7.

UD1 conjugation pathway; Wnt signaling pathway; Repeat; WD repeat; MD conjugation pathway; Wnt Signaling pathway; Repeat; MD repeat; MD 129 167 WD 1.

REPEAT 238 275 WD 1.

REPEAT 318 355 WD 2.

REPEAT 318 355 WD 2.

REPEAT 401 440 WD 5.
                                                                                                                                                                                                                                                                                                                                                          /FTIG=VSP 006765.
CSVPRSLWLGCANLVESMCALSCLQSMPSVRCL
MEDQNEDESPKRNTLW (in isoform B).
                                                                                                                                                                                                                                                                                                                                                                                                                                             31;
                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 78.6%; Score 2384.5; DB 1; Length 542; Best Local Similarity 79.0%; Pred. No. 7.6e-173; Matches 451; Conservative 48; Mismatches 41; Indels 31;
       EMBL, AF176022; AAF04528.1; -.
EMBL, AB033279; BAA92329.1; -.
EMBL, AB033280; BAA92330.1; -.
EMBL, AB033281; BAA3310.1; -.
EMBL, AB04596; BAA31671.1; ALT_INIT.
Genew: HGNC:13607; FEXWIB.
MIM; 605651; -.
GO; GO:000151; Cubiquitin ligase complex; NAS.
GO; GO:000482; F:ubiquitin-protein ligase activity; NAS.
                                                                                                                                                                                                                                                                                                                                                                                                  7CD40087EFAA5C8A CRC64;
                                                                                                                                                                                                                                                                         WD 1.
WD 2.
WD 4.
WD 5.
WD 6.
WD 7.
                                                                                                             InterPro; IPRO01810; F-box.
InterPro; IPR001680; WD40.
Pfam; PP00466; F-box; 1.
Pfam; PP00400; WD40.7.
PRINTS; PR00320; GPROTEINBRPT.
ProDom; PD000018; WD40; 4.
                                                                                                                                                                                                                                                                                                                                                                                                   MW;
                                                                                                                                                                                                                                                                                                                                                                                                    62090
                                                                                                                                                                             SMART; SM00256; FBOX; 1.
SMART; SM00320; WD40; 7.
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                                                                                                                                                                                                                                                                                                                                                                                                    542 AA;
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392 TCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRF 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNKRIVSGAYDGKIKVWDLQAALDPRAPASTLCLRTLVEHSGRVFRLQFDEFQIISSSHD
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SUBCELLURAR LOCATION: Cytoplasmic (Potential).
DEVELOPMENTAL STAGE: Highest levels in embryos and adults, lowest levels in larvae. Maternal expression results in high zygotic
                                                                                                   DNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., FUNCTION, DEVELOPMENTAL STAGE, AND MUTAGENESIS. MEDLINE=20515608; PubMed=11060233; Kipreos E.T., Gohel S.P., Hedgecock B.M.; The Caenorhabditis elegans F-box/WD-repeat protein lin-23 functions to limit cell division during development.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Nematoda, Chromadorea, Rhabditida, Rhabditoidea,
Rhabditidae, Peloderinae, Caenorhabditis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U28730; AAA68258.2; -. WormPep; K10B2.1; CE28600. GO; GO:0005737; C:cytoplasm; NAS. GO; GO:0005737; C:cytoplasm; NAS. InterPro; IPR001810; F-box. InterPro; IPR001810; F-box. InterPro; IPR00180; M440.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Miller N.;
Submitted (JUN-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li23 CAEEL STANDARD; PRT; 665 AA. 009596, OgGNn6, 15-UUL-1998 (Rel. 36, Created) 28-FEB-2003 (Rel. 41, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update) F-box/WD-repeat protein lin-23. CR K10B2.1.
                                                                                                                                                                                                                                                                                DILLINDFLNVPPSAQNETRSPSRTYTYISR 542
                                                                                                                                                                                                                                         DIILIWDFLNDPAAQAEPPRSPSRTYTYISR 569
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SIMILARITY: Contains 7 WD repeats.
SIMILARITY: STRONG, TO X.LAEVIS FBXWI.
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Schizosaccharomyces.
                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                       FROM N.A.
                                                   NCBI_TaxID=4896
                                                                                       SEQUENCE
 147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDR 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               263 GSVLCLQYDNRVIISGSSDATVRVWDVETGECIKTLIHHCEAVLHLRFANGIMVTCSKDR 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     443 YDGKIKVWDLQAALDPRALSSEICLCSLVQHTGRVFRLQFDDFQIVSSSHDDTILIWDFL 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMVRTDSLWRGLA 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILLTGHT 307
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323 SIAVWDMVSPRDITIRRVLVGHRAAVNVVDFDDRYIVSASGDRTIKVWSMDTLBFVRTLA 382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GHKRGIACLOYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGA 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               488 YDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFL 547
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G->R: IN LIN-32 (RH293)
                                                                                                                                                                                                                                                                                                                                                                           54.0%; Score 1638.5; DB 1; 63.7%; Pred. No. 2.6e-116; ive 59; Mismatches 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POFES SCHPO STANDARD; PRT; 506 AA. (09855; Q9P7V1; 16-55; Q9P7V1; 16-50FEB-1001 [Rel. 33, Created) 16-60FT-2001 [Rel. 40, Last sequence update) 28-FEB-2003 [Rel. 41, Last annotation update) P-box/WD-repeat protein pof11. Pop11 OR SPAC39E6.01 OR SPAC30.05. Schizosaccharomyces pombe (Fission yeast).
PRINTS; PR00320; GPROTEINBRPT.
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              ProDom; PD000018; WD40; 4.
SMART; SM00256; FBOX; 1.
SMART; SM00320; WD40; 7.
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423
472
525
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665 AA;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVW--DMASPTD 379
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           278 SGSSDSTIIIWDWQNRRPLKVYFGHTDNVLGVVVSENYIISSSRDHTARVWRLDATSPAE 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YRDRLVVSGSSDNTIRLWDIBCGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDL 497
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"Fission yeast F-box protein Pof3 is required for genome integrity and
telomere function";
Mol. Biol. Cell 13:211-224(2002).
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                                                                                                                                                                                                                                                                                      67 ENCVAK----TKLANGTSSMIVPKORKLSASYEKEKELCVKYFEQWSESDQVEFVEHLIS
                                                                                                                                                                                                                                                                                                                                                                                 123 QMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107 LEDPGIWKALYMQKGWFVNENVLNEFEAWRRTHKFPQPRFENFLKQQNIIGPYGTMFLPQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                265 -ETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDER--VII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     380 ITLRRVLVGHRAAVNVVDFDDK--YIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQ
                                                                                                                                                                                                                                                                                                                                 ------HÉNNRIDLIRDLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      214 QYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRS------
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                                                                                                                                                                                                                                       Conservative 104; Mismatches 167; Indels 102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183 TSDGMLWKKLI-----ERMVRTDSLWRG------LAERRGWG-
                                                                                                                                                                                            22.7%; Score 690; DB 1; Length 506; 30.4%; Pred. No. 1e-44;
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15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
15-JUL-1998 (Rel. 36, Last sequence update)
18-JUL-1998 (Rel. 41, Last sequence update)
18-PB-2003 (Rel. 41, Last amotation update)
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     298 WD
338 WD
386 WD
426 WD
505 WD
505 WD
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  259
301
345
388
427
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506 AA;
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es 163; Conserv
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SEQUENCE FROM N.A.
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SEQUENCE FROM N.A.
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        NEDLINE=21848101; PubMed=11859360;

Wood V., Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A., Rabinine=21848101; PubMed=11859360;

Wood V., Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A., Bouros J., Peach M., Chilingworth T., Churcher C.M., Brown D., Brown S., Chillingworth T., Churcher C.M., Collins M., Connor R., Cronin A., Davis P., Feltwell T., Fraser A., Achlins M., Connor R., Harris D., Hidalgo J., Hodgson G., Holroyd S., Hornsby T., Howarth S., Muchle E.J., Hunt S., Jagels K., James K., Jones L., Jones M., Leather S., McDonald S., McLean J., Anoney B., Moule S., Munghyll, Niblett D., Odell C., Oliver K., C'Neil S., Pearson D., Quail M.A., Rabbinowitsch E., Allingal R., Paylor K., Taylor R.G., Tivey A., Walth S., Stevens K., Stavens K., Stevens K., Stevens K., Stevens K., Stevens K., Arylor R.G., Tivey A., Walth S., Willer B., Muller-Yallor R.G., Tivey A., Walth S.V., Warter T., Whitehead S., Weltjens I., Vanstreels E., Rieger M., Schaefer M., Muller-Yallor R.G., Tivey A., Walth S., Mother B., Goffeau A., Cadieu E., Dreano S., Gloux S., Lelaure V., Motter S., Goffeau A., Cadieu E., Dreano S., Gloux S., Lelaure V., Motter S., Adaillardin C., Moore K., Hurst S.M., Dominguez A., Revuelta J.L., Jimenez M., Galzon A., Thode G., Ammatrong J., Forsburg S.L., Shapakovski G.V., Ussery D., Barrell B.G., Nurse P.;

The genome sequence of Schizosaccharcmyces pombe.";

Nature 415 871-88012002 Schizosaccharcmyces pombe.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- FUNCTION: Probably recognizes and binds to some phosphorylated proteins and promotes their ubiquitination and degradation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19.5%; Score 590.5; DB 1; Length 605; 29.0%; Pred. No. 4.3e-37; ive 66; Mismatches 189; Indels 107.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7118C9379EC5C1F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IFWULLED., ...

Pfam, PRO0646; F-Dox; I.

Pfam, PRO06019, WD40; 7.

RRINTS; PRO0320; GPROTEINBRPT.

R SMART; SM00256; FBOX; I.

R SMART; SM00320; WM40; 7.

R PROSITE: PS0082; WD_REPEATS 1; 2.

R PROSITE: PS0082; WD_REPEATS 2; 7.

PROSITE: PS05094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS 2; 7.

PROSITE: PS5094; WD_REPEATS ERGION; 1.

PROSITE: PS5094; WD_REPEATS ERGION; 1.

PROSITE: PS5094; WD_REPEATS ERGION; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BY SIMILARITY).
-!- SIMILARITY: Contains 1 F-box domain.
-!- SIMILARITY: Contains 7 WD repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MD 2.
MD 2.
MD 3.
MD 4.
MD 5.
MD 6.
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EMBL, 324864; CAB08168.1; -.
PIR, T38932; T38932.
GeneDB Spombe; SPAC57A.10.05c; -.
INTEPEO; IPR001810; F-box.
INTEPEO; IPR001680; WD40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67110 MW;
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Matches 156; Conservative
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239
339
420
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538
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472
510
605 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
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Pfam; PF00646; F-box; 1.
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MT30_YEAST
ID MT30_YEAST
AC P39014;
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Matches 149;
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       :|: :|:|| | |:|:| | |:|:| | ::|| | ::|| | ::|: | | ::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|| | :::|
                                                                                                                                                                                                                             102 DSLVRLDFLSLLPV----EISFRILSFLDARSLCQAAQVSKHWKELADDDVIWHRMCEQH 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          259 RIHCR----SETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQ 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                381 SGGKRITLR----GHTGPVNSVRIIRDRGLVLSGSDDSTIKIWSLEINTCLHTFSAHIGP 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 220 -------KPPDGNAPPNSF-----YRALYPKIIQDIETIESNWRCGRHSLQ 258
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            375 ASPIDITLRRVLVGHRAAVNVVDF--DDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRG 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                433 IACLOYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKI 492
                                SSMIVPKQRKLSASYEKEKELCVKYFEQWSE---SDQVEFVEHLISQMCHYQHGHINSYL 136
                                                                                                46 SSM----HNELSGLSEKSRQRVEAVWAAFSEASCSERKLALQGILNNCSSSLLSFASSTL 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             497 KVWEACE------CVHTLKNHSEPVTSVALGDCEVVSGSEDGKIYLWLFNNAP 543
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--- SIMILARITY: Contains 8 WD repeats.
--- SIMILARITY: Contains 1 F-box domain.
--- SIMILARITY: BELONGS TO THE MET30/SCONB/SCON-2 FAMILY OF WD-REPEAT PROTEINS.
                                                                                                                                                                                                                                                                                                                             197 VRTDSLWRGLAERRGWGQYLFKN-----
                                                                                                                                                                                                                                                                                                                                                                                                             158 INRK-----CEKCGWGLPLLERNTLYAAKASIQKRYERLTKRGVDQAHESSPVKKAKLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 493 KUWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Natorff R.;
Submitted (JUN-1995) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: REGULATORY PROTEIN THAT CONTROL SULFUR METABOLITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Fungi, Ascomycota, Pezizomycotina, Eurotiomycetes,
Eurotiales, Trichocomaceae, Emericella.
NCBI_TaxID=162425;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SCOB_EMENI STANDARD; PRT; 678 AA. 000659. 15-UU-1998 (Rel. 36, Last sequence update) 15-UUL-1998 (Rel. 36, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update) SCONB OR MAPPEl.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL, U21220, AAC15905.1; -.
InterPro, IPR001810, F-box.
InterPro, IPR001680, WD40.
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------RLVVSGSSDNTIRLWDIECGACLRVLEGHEEL 472
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117 VEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVC 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               209 RGWRALADDDVVWHRMCEQHIHRK-----CKKCGWGLPLLDRKRLRESKREIELRATTW 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              294 KNTLECKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHL 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            376 TETGEBLRTLRGHESGIRCLQPDDTKLISGSMDRTIKVWNWRTGECISTYTGHRGGVIGL 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           612 VWALGADTLRIVSGAEDRMÍKÍWD------PRTGKČEŘÍFTGHSGPVÍCIGLGDSRF 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DKGVVGPRSPDASAESPPSGKRKLEDDEVAVVKRHCSSLGSDAGVDKDSDFFKTRYRPWK 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    354 RFNNGMMYTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV--VDFDDKYIVSASGDRT 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        492 VRLWDLDTKTCIRTFHGHVGQVQQVVPLPREFEFEFHDAEČENDDLSTTSGDANPPSIQA 551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KIIQDIETIESNWRCGRHSLQRIHCRSETSK----GVYCLQYDDQKIVSGLRDNTIKIWD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 678;
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                                                                                                                                                                                                                                                                                                                                                                                    D840D452E37B4C53 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                          19.0%; Score 575; DB 1; 26.9%; Pred. No. 7.4e-36;
      PIRMIS, FROGSOUS, WASAUS, P. PRINIS, FROGSOUS, WASAUS, P. PRINIS, PROGSOUS, WASAUS, SMART; SMOGSOS, PROX; 1.

SMART; SMOGSOS, WADAUS, 7.

PROSITE; PSOGOSS, WASPERATS 1; 4.

PROSITE; PSOGOSS, WASPERATS 2; 7.

PROSITE; PSOGOSS, WASPERATS 2; 7.

PROSITE; PSOGOSS, WASPERATS REGION; 1.

PROSITE; PSOSOUS, WASPERATS REGION; 1.

PROSITE; PSOSOUS, WASPERATS REGION; 1.

PROMIN 178 224

PROX.
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(Rel. 31, Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               83; Mismatches
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                                                                                                                                                                                                                  WD 1.
WD 2.
WD 4.
WD 5.
WD 6.
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315 WD
415 WD
455 WD
456 WD
596 WD
6070 WM
76070 MW
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663 ATGSEDCEVRMYSF 676
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PF00400; WD40; 7.
                                                                                                                                                                                                                                                                                                                                                              647
678 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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01-FEB-1995
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211
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    Query Match
                           Best Local
                                             Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                              Churcher C.M., Bowman S., Badcock K., Bankier A., Brown D., Chilingworth T., Connor R., Devlin K., Gentles S., Hamlin N., Harris D.E., Horsnell T., Hors S., Jagels K., Jones M., Lye G., Moule S., Odell C., Pearson D., Rajandream M.A., Rice P., Rowley N., Skelton J., Smith V., Walsh S., Whitehead S., Barrell B.G., "The nucleotide sequence of Saccharomyces cerevisiae chromosome IX."; Nature 387:84-87(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SUBUNIT: SEEMS TO INTERACT WITH MET4.
-!- SIMILARITY: CONTAINS 1 F-box domain.
-!- SIMILARITY: CONTAINS 8 WD repeats.
-!- SIMILARITY: BELONGS TO THE MET30/SCONB/SCON-2 FAMILY OF WD-REPEAT
                                                                                                                                                                                                                MEDLINE=96069360; PubMed=8524217;
Thomas D., Kuras L., Barbey R., Cherest H., Blaiseau P.L.,
Surdin-Kerjan Y.,
"Met30p, a yeast transcriptional inhibitor that responds to S-
adenosylmethionine, is an essential protein with WD40 repeats.";
Mol. Cell, Biol. 15:6526-6534(1995).
                                                                                       Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPROutbow,

R Pfam; PF00646; F-box; 1.

R Pfam; PF00400; WD40; 7.

R PATMYS: PR00320; GPRCTEINBRPT.

R PATMYS: RM00256; FB0X; 1.

R RAAT; SM00256; FB0X; 1.

R RAAT; SM00250; WD40; 6.

DR RROSITE; PS50181; FB0X; 1.

DR RROSITE; PS50082; WD REPEATS. 1; 4.

DR PROSITE; PS50082; WD REPEATS. 2; 6.

PROSITE; PS50294; WD REPEATS. REGION; 1.

TATASCRIPTION regulation; Methiosine biosynthesis;

"Vartaine biosynthesis; Repeat: WD repeat.

"Vartaine biosynthesis; Repeat.

F-BOX.
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5135D4BCA2E1EB97 CRC64;
                                                                                                         Saccharomycetales; Saccharomycetaceae; Saccharomyces.
NCBI_TaxID=4932;
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WD 3.
WD 5.
WD 6.
WD 6.
Last annotation update!
                                                                Saccharomyces cerevisiae (Baker's yeast).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL, Z46861, CAA86905.1; --
EMBL, L26505, AAA96717.1; --
PIR, S49932, S49932.
SGD; S0001308, MET30.
InterPro, IPR001810; F-box.
InterPro, IPR001680; WD40.
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4449
8449
8738
8738
  15-SEP-2003 (Rel. 42,
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
STRAIN=S288c / AB972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENES EXPRESSION.
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61
640 AA;
                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=9169870;
Churcher C.M., Bow
Chillingworth T.,
                      MET30 protein.
MET30 OR YIL046W.
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CONFLICT
SEQUENCE
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REPEAT
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17;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          466 VOKIIPLIIKDVENLATDNISDGSSPQDDPIMTDGADESDIPSNEQETVLDENIPYPTHL 525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----DNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDP 503
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                                                                                                                                                                                                                                                                                                                                                                                          152 GLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMVRTDSLWRGLAERR- 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                        --QELSIKIISYLDCQSICNATRVCRKWQKLADDDRVWYHMCEQHI------DRKC 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --- GWGQYLFKWK------PPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQ 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         237 PNCGWGLPLLHMKRARIQQNSTGSSSNADIQTQTTRPWKVIYRERFKVESNWRKG---- 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     259 RIHCRSETSK----GVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILIGHTGSVLCLQ 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                292 --HCKIQEFKGHMDGVLTLQFNYRLLFTGSYDSTIGIWDLFTGKLIRRLSGHSDGVKTLY 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    YDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDM 374
                                                                                                                                                                                                                                                              92 ASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPAR 151
                                                                                                                                  34 IPEKNSLRQTYNSCARLCLN-QETVCLASTAMKTENCVAK-TKLANGTSSMIVPKQRKLS 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN=14-0723-1A, FGSC 987;
MREDLINE=5241499; PubMed=7724564;
Kumar A., Paietta J.V.;
The sulfur controller-2 negative regulatory gene of Neurospora crassa encodes a protein with beta-transducin repeats.";
Proc. Natl. Acad. Sci. U.S.A. 92:3343-3347(1995).
-!-FUNCTION: NEGATIVELY REGULATES SULFUR STRUCTIVALA CENE EXPRESSION.
-!- INDUCTION: EXPRESSED ONLY UNDER LOW-SULFUR CONDITIONS.
-!- SIMILARITY: Contains 8 WD repeats.
-!- SIMILARITY: Contains 1 F-box domain.
-!- SIMILARITY: BELONGS TO THE MET30/SCONB/SCON-2 FAMILY OF WD-REPEAT PROTEINS.
                                                                                                                                                                                             86 LPBYNFTKFCYRHNPDIQFSPTHTACYKQDLKRTQBINANIAKLPLQBQSDIHHIISKYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                375 ASPIDITLRRVLVGHRAAVNVVDFDDKY1--VSASGDRTIKVWNTSTCEFVRTLNGH---
                                                                    Gaps
                                                                    124;
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Sordariomycetidae, Sordariales, Sordariaceae, Neurospora.
   Length 640;
                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                504 RAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTI 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----KCMHTF---NGR--RLORETOHTOTOSLGDKV 609
                                                                 85; Mismatches 202;
18.0%; Score 545; DB 1; 28.9%; Pred. No. 1.3e-33;
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15-JUL-1998 (Rel. 36, Last sequence update)
28-FBE-2003 (Rel. 41, Last annotation update)
Sulfur controller-2 (SCON2)
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                                                                 167; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                  Similarity
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510 LCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDF 546
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MD 3...
MD 4...
MD 5...
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InterPro; IPR001810; F-box.
InterPro; IPR001680; WD40.
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Matches 150; Conservative
                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                              Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          328
368
408
453
493
579 AA;
                                                                                                                                                                                                                                                         Sel-10 protein.
SEL-10 OR F55B12.3.
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                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. STRAIN=Bristol N2;
                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=6239;
                                                                                                                                                       SE10 CAEEL 093794;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 382 FDGHLLASGSSDKTVKIFDFNSKETYCLK----GHSDWVNSTHVDIKSRTVFSASDDTTI 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----GSSD 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        269 VÝ----RDRWQVSYNWKNSRYKLSVL---KGHENGVTCLQLDDNILATGSYDTTÍKÍWNI 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295 NTLECKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLR 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGT 509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117 VEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99 LOGILSQLCFPOLSFVSREVNBALKIDFISALPV----ELAOKVLCYLDTVSLTKAAQVS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    235 LYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            355 FINGMMVTCSKDRSIAVWDMASPIDITLRRVLVGHRAAVNV--VDFDDKYIVSASGDRTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         413 KVWNTSTCEFVRTLNGHKRGI------ACLQYRDRLVVS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           498 MSHAQIERAGSPGSHSSSHNLLPSSLPSGDEDVRHLYGSAFVADESRPLPPRYFMTGGLD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 650;
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                                                                                                                                                                                                                                                                                                                                                                                                                                   regulation; Repeat; WD repeat.
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InterPro; IPR001810; F-box.
InterPro; IPR00180; WD40.
Pfam; PF000460; P-box; 1.
Pfam; PF000400; WD40; 7.
PRINTS; PR00320; GPROTEINBRPT.
ProDom; PD000018; WD40; 3.
SWART; SW00326; FBOX; 1.
SWART; SW00326; FBOX; 1.
PROSITE; PS50181; FBOX; 1.
PROSITE; PS500181; FBOX; 1.
PROSITE; PS500181; WD.REPEATS_1; 2.
PROSITE; PS500182; WD.REPEATS_2; 6.
PROSITE; PS500182; WD.REPEATS_2; 6.
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                                                                                                                                                         EMBL; U17251; AAA68968.1; -.
PIR; T46660; T46660.
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Matches 144; Conservative
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400
441
488
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86
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                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Metazoa, Nematoda, Chromadorea, Rhabditida, Rhabditoidea,
Rhabditidae, Peloderinae, Caenorhabditis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jones S.J.M.;
Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: Contains 1 F-box domain.
-!- SIMILARITY: Contains 7 WD repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0647245AF5964663 CRC64;
609 KCDATYTGHCGPVTCVGLSDSLMASGSEDGTIRLHSF 645
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                                                                                                                                                                                                                                     15-JUL-1998 (Rel. 36, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
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Pfam; PP00400; WD40; 7.
Probom; PR00400; WD40; 7.
Probom; PR005018; WD40; 3.
SMART; SW00256; PB0X; 1.
PROSITE; PS50181; PB0X; 1.
PROSITE; PS50181; PB0X; 1.
PROSITE; PS500878; WD_REPEATS 1; 5.
PROSITE; PS50082; WD_REPEATS 1; 5.
PROSITE; PS50084; WD_REPEATS 2; 7.
Repeat; WD_repeat.
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GPROTEINBRPT.

us-09-601-168b-2.rsp

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PRINTS; PR00320;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the ENIBL Unstration—the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     273
                                                                                                                                                                                                                                         CDLNVHRFLKLQKFGDIFERAADKSRYLRADKIEKNWNANPIMGSAV-LRGHEDHVITCM 254
                                                                                                                                                                                                                                                                                                                       WDVNTGEMINTLIHHCEAVLHERFNNGMMVTCSKDRSIAVWDMASPTDITERRVLVGHRA 391
  FVEHLISOMCHYOHGHINSYLKPMLORDFITALPARGLDHIAENILSYLDAKSLCAAELV 175
                                                                                                                                                                                                                                                                                                                                                                                                                           Shieh J.C., White A.M., Rosamond J.;
Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: THIS PROTENT IS ESSENTIAL FOR INITIATION OF DNA
REPLICATION AND SEPARATION OF THE SPINDLE POLE BODIES TO FORM THE
POLES OF THE MITOTIC SPINDLE. IT ALSO PLAYS A ROLE IN BUD
DEVELOPMENT, FUSION OF ZYGOTIC NUCLEI AFTER CONJUGATION AND
VARIOUS ASPECTS OF SPORULATION. REQUIRED FOR HTAL-HTBI LOCUS
TRANSCRIPTION ACTIVATION (BY SINILARITY).
-!- SIMILARITY: Contains 7 WD repeats.
                                  RIDSLWRGLAERRGWGQYLFKNKPPDGNAP
                                                                                                                                                                                            PN-SFYRALYPKIIQDI-------ETIESNWRCGRHSLQRIHCRSETSKGVYCL
                                                                                                                                                                                                                                                                                        QYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDE--RVIITGSSDSTVRV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDR--LVVSGSSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      372 AVRCVQFDGTTVVSGGYDFTVKIMNAHTGRCIRTLTGHNNRVYSLLFESERSIVCSGSLD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        450 NTIRLWDI---ECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAP
                                                                                                                                             143 SKWWKLISEIDKIWKSLGVEBFKHHPDPTDRVTGAWOGTAIAAG------VTIPDHIQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Candida albicans (Yeast).

Bukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; mitosporic Saccharomycetales; Candida.

NCBI_TaxID=5476;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                484 EGT-CVHMLSGHRSAITSLOWFGRNWVATSSDDGTVKLWD 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTLCLRTLVEHSGRVFRLQ-FDEFQIVSSSHDDTILIWD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Cell division control protein 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         684 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; X96763; CAA65538.1; -. InterPro; IPR011810; F-box. InterPro; IPR001680; WD40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001680; WD4.
Pfam; PF00646; F-box; 1.
Pfam; PF00400; WD40; 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=SGY126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CANAL
                                                                                                                                                                                               228
                                                                                                                                                                                                                                           196
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CDC4 CANAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283 REWSTLPEINSAQVLYKK----RKIIVNRWMDPKFKPHRISVSGHGNKVVTCLQHDDEKV 338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---GNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    399 HIFRGHISTIRCLDIIHPAVIGKNODGEDIVFPEYPLLITGSRDHNIHVWKLPVVDDSQD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    459 YIETFEGEFDNPYLIAVLSGHTQSVRSISGYGNIIISGSYDSTVRVWDLLDDGHCTHVLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GH--RAAVNVVDFDDKYIVSASGDRIIKVMNTSTCEFVRTLNGHKRGIACLQYRDRLVVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GHLDRVYSTAIDFHSKTCFSGSMDSNINVWNFETGELKKVLVGHASLVGLLDLVDDVLVS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEANONHLVFKLLQKTTRPTLSTFNNLINNSLKRDILSNVPF----EVTMKILSYLDYKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LCAAELVCKEWYRVTSDGMLWKKLIER--MVRTDSLWRGLAERRGWGQYLFKNKPPD---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           341 NTLIHH-----CEAVLHL----RFNNG--------MWTCSKDRSIAVWDM-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    506 PAGTLCLRTLVEHSGRVFRLQFD-----EFQIVSSSHDDTIL-IWDFLNDPAAQ 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Fungi, Ascomycota, Pezizomycotina, Sordariomycetes, Sordariomycetidae, Sordariales, Lasiosphaeriaceae, Podospora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 684;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                            Repeat; WD repeat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3DD65DB31293B107 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 1.8e-28; 95; Mismatches 184;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Vegetatible incompatibility protein HET-E-1.
HET-E1.
                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT; 1356 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15.7%; Score 477.5;
PROSITE; PS50181, FEOX; 1.
PROSITE; PS00678; WD_REPEATS_1; 4.
PROSITE; PS50082; WD_REPEATS_2; 4.
PROSITE; PS50294; WD_REPEATS_ESIGN; 1.
Cell division; Mitcais; Sporulation; Reconn. 212
DOMAIN
                                                                                                                                                                                                                                                                                            WD 3.
WD 4.
WD 5.
WD 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              76090 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 25.4
hes 136; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                            391
431
468
506
549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Podospora anserina.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         684 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=5145;
[1]
                                                                                                                                                                                                                   2112
3212
3422
4442
5119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NX OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATION OCCUPATI
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us-09-601-168b-2.rsp

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POPT SCHPO
STANDARD; PRT; 775 AA.
P87066, Q9P7PB;
T5-JUL-1998 (Rel. 36, Last sequence update)
T5-JUL-1998 (Rel. 36, Last sequence update)
T5-JUL-1998 (Rel. 41, Last annotation update)
E WD-repeat protein pop1.
N Pop1 OR SPBC1718.01 OR SPBC2G2.18.
S Chizosaccharomyces pombe (Tission yeast).
C Bukaryota; Pungi; Ascomycota; Schizosaccharomycetes; Schizosaccharomycetales; Schizosaccharomycetales.
                                                            1150 VASGSIDGTIKIWDAASGTCTO 1171
                                     532 IVSSSHDDTILIWDFLNDPAAQ 553
                                                                                                                                                                                                                                                                                        STRAIN=972;
MEDLINE=97347242; PubMed=9203581;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99144318; PubMed=9990507;
                                                                                                                                                                                                                                                                                                               Kominami K., Toda T.;
                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                       NCBI_TaxID=4896;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBUNIT
                                                                                                                                 ò
                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the FRBL outstation the Buropean Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@ibb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STCEFVRILNGHKRGIACLQYR -- DRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRC 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          304 TGHTGSVLCLQY--DERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFN-NGMM 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          922 EGHGGRVQSVAFSPDGQRVASGSDDHTIKIWDAASGTCTQTLEGHGSSVLSVAFSPDGQR 981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       476 IRF -- DNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQF -- DEFQ 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          802 APTDSMIKKIFKKEEPGWISTISVVEAEWNACTOTLEGHGSSVLSVAFSADGORVASGSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----ETSKG------VYCLQY--DDQKIVSGLRDNTIKIWDKNTLECKRIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VTC-SKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDF--DDKYIVSASGDRTIKVWNT
                                                                                  INCOMPATIBILITY THROUGH ALLELES OF THE UNLINKED GENE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26 APPNSFYRALY----PKIIQDIETIESNWRCGRHSL----------ORIHCRS-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66; Gaps
        MEDLINE=9600991; PubMed=7557402; Saupe S., Turcq B., Bequeret J.; Saupe S., Turcq B., Bequeret J.; Saupe S., Turcq B., Bequeret J.; A gene responsible for vegetative incompatibility in the fungus Podospora anserina encodes a protein with a GTP-binding motif and beta homologous domain."; beta homologous domain."; elem 162:135-139(1995).
-1- FUNCTION: RESPONSIBLE FOR VEGETATIVE INCOMPATIBILITY THROUGH SPECIFIC INTERACTIONS WITH DIFFERENT ALLELES OF THE UNLINKED G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1356;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MW; 965FB319844E0651 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15.0%; Score 455.5; DB 1;
larity 31.7%; Pred. No. 2e-26;
Conservative 64; Mismatches 131;
                                                                                                                                                                                                                                                                                                                                                                                                                      GTP (POTENTIAL).
WD 1.
WD 2.
WD 4.
WD 5.
WD 6.
WD 7.
WD 7.
                                                                                                                                                                                                                                                                                               PEGM, PP00400; WD40; 10.
PRINTS; PR00120; GPRCTEINBRPT.
PRODOM; PR000019; WD40; 10.
SYMART; SW00320; WD40; 10.
PROSITE; PS50837; NACHT; 1.
PROSITE; PS00678; WD.REPEATS_1; 10.
PROSITE; PS50082; WD.REPEATS_2; 10.
PROSITE; PS50294; WD_REPEATS_2; 10.
                                                                                                                                -!- SIMILARITY: Contains 1 NACHT domain.
                                                                                                                    SIMILARITY: Contains 10 WD repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR007111; NACHT NTPase.
InterPro; IPR001680; WD40.
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PIR; T18521; T18521.
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1175 120
1217 124
1356 AA;
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Best Local Simi
Matches 121;
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ADELANIE 21848401; PubMed=11859360;

RA MEDLINE=21848401; PubMed=11859360;

RA WOOd V., GWilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A., RA Gource J., Peat N., Hayles J., Bakher S., Basham D., Bowman S., Bacooks K., Brown D., Browns S., Chillingworth T., Churcher C.M., RA Gollins M., Connor R., Cronin A., Davis P., Feltwell T., Fraser A., RA Gontles S., Goble A., Hamlin N., Harris D., Hidalgo J., Hodgson G., RA Holroyd S., Horneby T., Howarth S., Horles E.J., Hunt S., Jagels K., A James K., Jones L., Jones M., Leather S., McDonald S., McLean J., RA Mooney P., Moules M., Sugnares R., Seeger K., Sharp S., Rabbinowitsch E., RA Rutherford K., Zhuces M., Squares R., Squares S., Stewens K., Androw S., Standor M., Simmonia M., Squares R., Squares S., Stewens K., Androw S., Standor M., Simmonia M., Squares R., Squares S., Stewens K., Androw S., Ra Gabel C., Puchs M., Fritzc C., Holzer M., Mulbert H., Mulbert H., Reinhard R., Pohl T.M., R. Berz P., Zimmermann W., Wedler H., Reinhard R., Pohl T.M., R. Berz P., Zimmermann W., Wedler H., Rainhard R., Purnelle B., R. Goffeau A., Cadieu E., Dreano S., Gloux S., Lelaure V., Mottier S., Loas M., Rochet M., Gaillardin C., Tallada V.A., Garzon A., Thode G., Almanguez A., Ravvelta J.L., Mocrobie W.R., Pulsen I., Porsburg S.L., R. Shakovski G.V., Ussery D., Barrell B.G., Nurse P., R. Shakovski G.V., Ussery D., Barrell B.G., Nurse P., R. Shakovski G.V., Ussery D., Barrell B.G., Nurse P., R. Nature 415:871-880(2002).
"Fission yeast WD-repeat protein popl regulates genome ploidy through ubiquitin-proteasome-mediated degradation of the CDK inhibitor Ruml and the S-phase initiator CGC18,"; Genes Dev. 11:1348-1560(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kominami K.-I., Ochocorena I., Toda T.,
"Two F-box/WD-repeat proteins Popl and Pop2 form hetero- and homo-
complexes together with cullin-1 in fission yeast SCF (Skip-
cullin-1-F-box) ubiquitin ligase.";
Genes Cells 3:721-735(1998).
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                           RHSLQRIHCRSETSKGVYC---LQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSV 310
                                                                                                                                 311 LCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIA 370
                                                                                                                                                                                                                                                    LRVLEGHEELVRCIRFDNKR--IVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSG 520
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                                                                                                                                                                                                                                                                                                           ------TSTCEFVRTLNGHK---RGIACLQYRDRLVVSGSSDNTIRLWDIECGAC 462
                                                                                   390 LHAPEKIKRCSFPIHGVRLITKLOFDDDKIIVSTCSPRINIYDTKTGVLIRSLEBHEGDV
                                                                                                                                                                                                                                                                                                                                                       553 NPDONNDFTSATTNPFYIRTLRGHTDSVREVACL---GDLIVSASYDGTLRVWKASTGVC
                                                                                                                                                         450 WIFEYVGDILVIGSIDRIVRVWDLRIGECKQVFYGHISTIRCIKIVQGNQSTIDID----
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Eukaryota, Fungi, Ascomycota, Saccharomycotina, Saccharomycetes;
Saccharomycetales, Saccharomycetaceae, Saccharomyces.
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STRANIE-2886 (A. AB972;
MURAKAMI Y., Naitou M., Hagiwara H., Shibata T., Ozawa M.,
Sasanuma S.-I., Sasanuma M., Tsuchiya Y., Soeda E., Yokoyama K.,
Yamazaki M., Tashiro H., Eki T.;
"Analysis of the nucleotide sequence of chromosome VI from
                                                                                                                                                                                                                     371 VWDMASPIDIILRRVLVGHRAAVNVVDFDDKYIVSASGDRIIKVWN-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-AUG-1988 (Rel. 08, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
CE11 division control protein 4.
CDC4 OR YFL009W.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a related pseudogene.";
J. Mol. Biol. 195:233-245(1987).
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P07834;
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                                                                                                    121 REKCLKRRNSSLSSNLHANKRFLFNSQSDGNKKNETFPSTNYSNVFYPNNCDSKEVASET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181 TFSLDAPNNSVNYSYPSPNLLGNDSKTRQSFPPHSSSSSHNSLHEPVIYDFSSENPSIHP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301 LTGFPA----EITNLVLTHLDAPSLCAVSQVSHHWYKLVSSNEELWKSLFLKDGFFWDSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
Seibert V., Prohl C., Schoultz I., Rhee B., Lopez R., Abderazzaq K.,
Zhou C., Wolf D.A.;
                                      Zhou C., Wolf D.A.;
"Combinatorial diversity of fission yeast SCF ubiquitin ligases by
homo-and heterooligomeric assemblies of the F-box proteins Poplp ar
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PRINTS; PRO032.
SMART; SM00256; PBCA,
SWART; SM00320; WD40; 7.
PROSITE; PS50181; FBOX; 1.
"ACITE; PS00678; WD REPEATS_1; 3.
"ACITE; PS0082; WD REPEATS_2; 4.
"ACITE; PS0082; WD REPEATS_2; 4.
"ACITE; PS0082; WD REPEATS_EDOX.
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WD 3.
WD 4.
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SUBCELLULAR LOCATION: Nuclear
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EMBL; AL022103; CAA17898.1; -.
EMBL; AL157874; CAB75991.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR; T45136; T45136.
GeneDB SPombe; SPB0.T18.01; -.
InterPEO; IPR001810; F-box.
InterPEO; IPR001680; WD40.
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D&KIRTMCLEQSLSA---
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Pfam, PF00400, WD40; 6.
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775 AA;
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BEDLINES-SB11862B, PubMed=9653157;

Jallepalli P.V. Tien D., Kelly T.J.;

"sudl+ targets cyclin-dependent kinase-phosphorylated Cdc18 and Ruml
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-99227353; PubMed=10209119;
Wolf D.A., McKeon F., Jackson P.K.;
*F-box/WD-repeat proteins poplp and Sudip/Pop2p form complexes that
bind and direct the proteolysis of cdc18p.";
Curr. Biol. 9:373-376(1999).
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15-UUL-1998 (Rel. 36, Last sequence update)
28-PEB-2003 (Rel. 41, Last annotation update)
28-PEB-2003 (Rel. 41, Last annotation update)
POP2 OR SUDI OR SPAC4D7.03.
POP2 OR SUDI OR SPAC4D7.03.
Subsayora, Fungi, Ascomycota, Schizosaccharomycetes; Schizosaccharomycetales; Schizosaccharomycetales;
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MEDLINE~99144318; PubMed=9990507;
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NCBL_TaxID=4896;
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                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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24.3%; Pred. No. 1.8e-22;
ive 80; Mismatches 196; Indels 156; Gaps
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            as its content
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EMBL, D50617; BAA09229.1; --
EMBL, Z46555; CAA6341.1; --
PIR, S56245; S56245.
PDB: 1NEX; 18-FBB-03.
SGD: S0010865; CDC4.
GO; GO:0000082; P:G1/S transition of mitotic cell cycle;
CO:0000086; P:G2/M transition of mitotic cell cycle;
InterPro; IPR001810; F-box.
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non-profit institutions as long
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Pfam, PF00646; P-Dox; 1.
Pfam, PF00400; WD40, 6.
PRINTS, PR00320; GPROTEINBRPT.
Pr0DDm; P000018; WD40; 1.
SWART; SW00326; FBOX; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: Involved in maintenance of ploidy through proteasome dependent degradation of CDK inhibitor ruml and 8-phase initiator cdc18. Functions as a recognition factor for ruml and cdc18, which are subsequently ubiquitinated and targeted to the 26S proteasome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60 ASTAMKTENCVAKTKLANGISSMIVPKORKLSASYEK-EKELCVKYFEQWSESDQVEFVE
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                                                                                                                                                                        FUNCTION, SUBUNIT, AND SUBCELLULAR LOCATION.
MEDLINE=22325332; PubMed=12167173;
Seibert V, Prohl C., Schoultz I., Rhee E., Lopez R., Abderazzaq K., Zhou C., Wolf D.A., "Combinatorial diversity of fission yeast SCF ubiquitin ligases by homo-and heterooligomeric assemblies of the F-box proteins Poptp and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBUNIT: Homodimer and heterodimer with popl. Binds to pcul, pipl
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Kominami K.-I., Ochotorena I., Toda T.,
"Two F-box/WD-repeat proteins Popl and Pop2 form hetero- and
complexes together with cullin-1 in fission yeast SCF (Skip-
cullin-1-F-box) ubjquitin ligase.",
Genes Cells 3:721-735(1998).
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PRODOM; PD000018; WD40; 1.
SWART; SW00256; FBOX; 1.
PROSITE; PS50181; FBOX; 1.
PROSITE; PS50081; WD REPEATS 1; 3.
PROSITE; PS50082; WD REPEATS 2; 6.
PROSITE; PS50082; WD REPEATS 2; 6.
PROSITE; PS500824; WD REPEATS 2; 6.
PROSITE; PS50234; WD REPEATS 2; 6.
DOMAIN 236 283 FBOX; REPEAT 389 283 FBOX.
REPEAT 389 473 WD 1.
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-!- SIMILARITY: Contains 1 F-box domain.
-!- SIMILARITY: Contains 6 WD repeats.
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EMBL; 298602; CAB11275.1; -.
PIR; T4355; T43557.
GeneDB_SPombe; SPAC4D7.03; -.
InterPro; IPR001810; F-box.
InterPro; IPR001810; WD40.
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79605 MW;
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Pfam; PF00400; WD40; 6.
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212 PQLIRSCURQSMRLILMECEPLLKKDILSNLPP----SIVQSILLNLDIHSFLSCRLVSP 267
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Octal number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1107863 segs, 158726573 residues
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                                                                                                          OM protein - protein search, using sw model
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faximum DB seq length: 2000000000
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n bone man	Mouse ubiquitin li F-box protein FWD1	an protein	protein	protein	protein	à t	domain-	man E3 ubiq	_	P.	an polypept	phila mel	an beta TrC	Human DNA repair a	Beta-TRCP.N/SKP2.C	Drosophila melanog	Drosophila melanog	Drosophila melanog	Human 6myc-N-sel-1	Protein encoded by	g	Se	å	Se		hippocampa	edun	ı se	ppocampa	ary se	>	Human mammary sel-
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ALIGNMENTS

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Beta-transducin repeat containing protein; beta-TrcP; Skplp; processome degradation pathway; Vpu protein; beta-catein; human immune defliciency virus-1; HIV-1; cellular protein; HappaB; ubiquitinylation; phosphorylated protein; tumour; apoptosis; Alzheimer's; antiviral; antitumour; cell cycle regulation; protein degradation; and anti-inflammatory; osteo-articular inflammation; acute inflammation; tumour necrosis factor.
                                                                                                                                                                                                                                                                                                                                                                                        A human beta-transducin repeat containing protein.
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                                                                                   AAY24054 standard; Protein; 569 AA
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30-SEP-1999
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The present invention describes an F-box motif protein of ubiquitin ligase SCF complex which promotes the ubiquitination of IkappaB or beta-catenia and is constituted by Skpl protein. Cull protein and a complex (SCF complex) of F-box protein containing F-box motif and WD40 repeat motif and has the amino acid sequence of 45 residues (AAB12B11) or one of two 569 residue sequences (AAB12B12, which is mouse ubiquitin ligase FWD1 protein) and (AAB12B13, which is man beta-transducin repeat containing protein (Deta-TroE). The F-box protein can be used for the gene therapy of colon cancer by being recombined to a virus vector.
                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                            481 KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT 540
RILIGHIGSVICLOYDERVIIIGSSDSTVRVWDVNTGEMLNTLIHHCBAVLHLRFNNGMM 360
                                                                                                             Human beta-transducin repeat containing protein (beta-TrCP) SEQ ID NO:3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ubiquitin ligase SCF complex; F-box protein; ubiquitination; IkappaB; beta-catenin; Skpl; Cull; F-box motif; WD40 repeat motif; FWD1; gene therapy; colon cancer; beta-transducin repeat containing protein; beta-TrCP.
                                                                                                                                                                         VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC
                                                                                                                                                                                                               VICSKDRSIAVWDMASPIDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRIIKVWNISIC
                                                                                                                                                                                                                                                               421 EFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN
                                                                                                                                                                                                                                                                                                                                                     KRIVSGAYRGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 ILIWDFLNDPAAQABPRSPSRTYTYISR 569
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 3; Page 10-12; 19pp; Japanese
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB12813 standard; protein; 569
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N-PSDB; AAA73132.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDPABAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYBKEKELCVKYFEQWSESDQVEFVEHL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 ISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY
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                                                                                                                                                                                                                                                                                                                                                                                                                          Durand H;
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                                                                  /note= "WD motif"
516..544
/note= "WD motif"
    427..455
/note= "WD motif"
467..492
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es 569; Conservative
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-PSDB; AAX86501.
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DB 21; Length 569; 100.0%; Score 3034;

181 181 241 241 301 361 361 421 421

301

121

61

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VICSKDRSIAVWDMASPIDIILRRVLVGHRAAVNVVDFDDKYIVSASGDRIKVWNISTC 420
                                                                                                                                                                                                                                                    Human beta-TrCP, an F-box/WD protein family member, has been shown to have homology to human E3 ubiquitin ligase (E3). E3 enhances ubiquitination of phosphorylated I-kappa-B, an inhibitor protein of nuclear factor kappa-B (NF kappa-B). Understanding I-kappa-B degradation via the ubiquitin pathway is useful for identifying modulators of this process for use in treating diseases associated with activation of NF kappa-B. In vitro analysis suggests that deletion of the F-box results in a protein that functions as a dominant negative molecule in vivo. Transient over-expression of delta-beta-TrCP (a deletion mutant) inhibited the degradation of endogenous I-kappa-B alpha in stimulated Jurkat cells, resulting in accumulation of phosphorylated I-kappa-B-alpha - B can be used to screen for modulators of NF-kappa-B activity. E3 and beta-TrCP can be used to modulate NF-kappa-B to treat inflammatory diseases, autoimmune diseases, cancer and viral infections.
                                                                                            Polypeptide enhancing phosphorylated lkappaB ubiquitination useful for treating disorder associated with NF-kappaB activation e.g. cancer, comprising amino acid sequence of human E3 ubiquitin ligase or its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 3034; DB 21; Length 569; 100.0%; Pred. No. 2.5e-286; tive 0; Mismatches 0; Indels 0;
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Matches 569; Conservative
                             WPI; 2000-431294/37.
N-PSDB; AAA51229.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          569 AA;
                                                                                                                                                                                                               Claim 21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hatzubai A;
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                             Indels
  Pred. No. 2.5e-286; Mismatches 0;
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                          les 569; Conservative
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Local Similarity
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                                                                   QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Targeting degradation of polypeptide useful for treating cancer and other proliferative disorders, involves conjugating polypeptide with ubiquitin protein ligase or inhibiting ubiquitination using organic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ubiquitin ligase, SCF, F-box protein, targeted degradation; destabilisation; proteolysis; drug discovery; gene therapy; cancer; oncoprotein; Huntington's disease; gene knockout; delivery systems;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jases with F-box motifs (F-box proteins) are useful for diagnosis proliferative and differentiated related disorders by measuring proliferative and differentiated related disorders by measuring gene expression. Calls expressing such proteins or air fragments are useful for screening compounds. The compounds agonists or antagonists, which are useful for treating a liferative or differentiative disorder in a mammal such as ast, ovarian and prostate cancer and small cell lung carcinoma divosacular diseases and inflammatory disorders. FBP protein, also useful in diagnosis of the disorders.
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Oat

Homo sapiens

0 120 180 180 240 300 300 360 360 420 420 480 480 09 09 preasing the level of a target polypeptide and for creating and expessing a destabilized polypeptide which is subjected to SCF sediated proteolysis. Degrading any desired protein in a cell is seful for preventing or treating diseases caused by the presence of mormal amount of the specific polypeptides, for drug discovery and trophen therapy. Diseases treated include cancer, by degradation of coproteins, Huntington's disease, other proliferative disorders and crophal infections. The method provides a quick and easy corbinal infections. The method provides a quick and easy degradation of degraded at all stages, or a specific stage, of development in the 1 MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNGETVCLA MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNOETVCLA STAMKTENCVAKTKLANGTSSMIVPKORKLSASYEKEKELCVKYFEOWSESDQVEFVEHL STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL ISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK RILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMM RILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMINTLIHHCEAVLHLRFNNGMM VICSKDRSIAVWDMASPIDIILRRVLVGHRAAVNVVDFDDKYIVSASGDRIIKVWNTSTC VICSKDRSIAVWDMASPIDIILERVLVGHRAAVNVVDFDDKYIVSASGDRIIKVWNTSIC EPVRTLNGHKRGIACLOYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN EFVRTENGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT ISOMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY Gaps . 0 100.0%; Score 3034; DB 21; Length 569; 100.0%; Pred. No. 2.5e-286; tive 0; Mismatches 0; Indels 0; ILIWDFLNDPAAQAEPPRSPSRTYTYISR 569 ILIWDFLNDPAQAEPPRSPSRTYTYISR Local Similarity 100 les 569; Conservative 569 AA; sture animal. adnence 61 121 181 241 241 301 361 421 481 481 541 181 301 361 421 / Match

744249 standard; Protein; 569

FEB-2000 (first entry)

nan cell signalling protein-12.

l signalling protein-12; CSICP-12; cell proliferation; lammatory disorder; cirrhosis; cancer; hepatitis; AIDS; eriosclerosis; Addison's disease; multiple sclerosis.

Patterson C; note= "Potential phosphorylation site" site" "Potential phosphorylation site" note= "Potential phosphorylation site" note= "Potential glycosylation site" "Potential glycosylation site" "Potential phosphorylation "Potential phosphorylation "Potential phosphorylation "Potential phosphorylation "Potential phosphorylation note= "Potential phosphorylation "Potential phosphorylation "Potential phosphorylation "Potential phosphorylation "Potential phosphorylation "Potential phosphorylation note= "Potential phosphorylation note= "Potential phosphorylation "Potential phosphorylation Tang YT, note= "Potential glycosylation /label= Signature_sequence 483.497 /label= Signature_sequence 320..334 /label= Signature_sequence 360..374 _ _ ____/label= Signature_sequence /label≈ Signature sequence 532..546 /label= Signature_sequence Yue H, Location/Qualifiers Ъ, Lal 98US-0085343. 99WO-US10567 .457 403..417 JL, (INCY-) INCYTE PHARM INC /note= 328 /note= 451 'note= note= note= note= note= note= note= note= note= note= note= Hillman WPI; 2000-086432/07. N-PSDB; AAZ29233. Yang J; Key Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site Modified-site 13-MAY-1999; WO9958558-A2 13-MAY-1998; 26-AUG-1998; 18-NOV-1999 Bandman O, Baughn MR, Region Region Region Region Region Region Cytostatic; immunomodulator; cardiant; antiinflammatory; antimicrobial;

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SEQ ID

Human F-box protein FBP1

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he present sequence is cell signalling protein-12 (CSIGP-12) encoded y cDNA obtained from Incyte clone 3239149 of COLAUCTO1 library. It is syptessed in musculoskeletal, gastrointestinal and nervous tissues and is ound to be homologous to beta-transducin repeats containing rotein. Fragments of CSIGP encoding nucleic acid can be used as ypridisation probe for detecting CSIGP related sequences or allelic ariants. Recombinant CSIGP can be produced in host cells by transforming hem with genetically engineered vectors. Agoniets or antagonists can be sed in the treatment of cell proliferative and inflammatory disorders ssociated with decreased or increased CSIGP expression. CSIGP is used in he diagnosis, prevention and treatment of cell proliferative disorders like atteriosclerosis, cirrhosis, cancer, hepatitis and inflammatory isorders is learned to the disorders interactive disorders interactive AlDS, Addison's disease, multiple sclerosis, etc.
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         uman cell signaling proteins useful for, roliferative and inflammatory disorders
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The invention relates to screening compounds useful for the treatment of proliferative or differentiative disorders comprising detecting a change in the activity of Skp2 (P-box protein). The method is useful for screening compounds for the treatment of proliferative or differentiative disorders, particularly cancer. These compounds include small molecules, or compounds or derivatives or analogues of the new ubiquitin ligases. The compounds are useful for treating diseases such as cancer (e.g. breast cancer, prostate cancer or ovarian cancer, lymphoma, small cell lung cardinoma or parathyroid adenomas), major opportunistic infections, immune disorders, certain cardiovascular diseases or inflammatory disorders. This sequence represents an P-box protein (FBP) relating to ö 120 RIDIGHIGSVLCLOYDERVIIIGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMM 360 09 proliferative; differentiative disorder; Skp2; F-box protein; cancer; ubiquitin ligase; breast cancer; prostate cancer; ovarian cancer; small cell lung carcinoma; immune disorder; parathyroid adenoma; FBP; inflammatory disorder; lymphoma; major opportunistic infection; certain cardiovascular disease; human. STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGOYLFKNKPPDGNAPPNSFYRALYPKII QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK Screening compounds for treating proliferative disorders, e.g. breast cancer or prostrate cancer, infections or immune disorders, comprises detecting a change in the activity of $\rm Skp2$ with either p27 or $\rm Cks1$ -1 MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA 1 MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPBKNSLRQTYNSCARLCLNQETVCLA STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL ISOMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY ISOMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII Gaps 0; Length 569; Indels DB 23; ; Score 3034; DB 23; ; Pred. No. 2.5e-286; 0; Mismatches 0; Disclosure; Fig 3; 246pp; English 100.0%; 07-JAN-2002; 2002WO-US00311. 05-JAN-2001; 2001US-260179P. (UYNY) UNIV NEW YORK STATE. Query Match
Best Local Similarity 100.
Matches 569; Conservative WPI; 2002-599665/64. 569 AA; N-PSDB; AAL41041 WO200255665-A2 Homo sapiens Pagano M; 61 181 241 301 Sequence 181 q ò 셤 à 원 ò g ò g ò ò 540 KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSGHDDT KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s invention relates to a complex of protein-protein interactions saming a protein-protein interaction map, PPM) in adipocyte cells as fined in the specification, or polymucleotides in adipocyte encoding the polypeptides. Also included are a recombinant cell expressing the seracting polypeptides and a method of selecting a modulating compound adipocyte cells. By cuttivating a recombinant host cell on a selective lium containing a modulating compound and a reporter gene the ression of which is toxic for the recombinant host cell which is insformed with two vectors, where the first vector comprises a singformed with two vectors, where the first vector comprises a sond which escond vector comprising a polymucleotide encoding a singly peptide and an activating domain that activates the cir reporter gene, when the first and second hybrid polypeptides and an activating domain that activates the cir reporter gene, when the first and second hybrid polypeptides exact and secleting the modulating compound which inhibits the with of the recombinant host cell (i.e. using the yeast two-hybrid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  man; yeast two-hybrid assay; adipocyte; bait protein; NIDDM; n-insulin diabetes mellitus; obesity; selected interacting domain; D; protein-protein interaction map; PIM; anorectic; metabolic disorder.
                                                                                                                                                                                                                               KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQPDEFQIVSSSHDDT
                    RILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMM
                                                                                            VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC
                                                                                                                                    EFVRTINGHKRGIACLOYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN
                                                                                                                                                             KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT
                                                            VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC
vel complex of protein-protein interactions in adipocyte cells for sutifying compounds that modulate the protein-protein interactions i useful for treating obesity and metabolic disorders -
                                                                                                                                                                                                                                                                                      ILIMDFLNDPAAQAEPPRSPSRTYTYISR 569
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ARS ) CENT NAT RECH
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>SDB; ABS51009.
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compounds that modulate
                    the protein-protein interactions and useful for treating obesity and metabolic disorders e.g. non-insulin dependent diabetes mellitus, by DDM. The compound isolated by the method is useful for treating and preventing obesity or metabolic diseases. The interactions between the proteins of the complex further define a set of selected interacting domains, SID. The present sequence represents a member of the protein phybrid assay.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241 QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Score 3034; DB 23;
; Pred. No. 2.5e-286;
0; Mismatches 0;
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481 KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT 540
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Pred. No. 1.
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                                                                                                                             AAM00960 standard; Protein; 608
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2000US-0552317.
2000US-0598042.
2000US-0620312.
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; 2000US-0662191.
; 2000US-0693036.
; 2000US-0250583.
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Best Local Similarity
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09-JUL-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                le invention relates to methods of altering the polypeptide levels in a all, using proteins selected from S-phase kinase associated proteins 1 d 2 (SRI, SKP2), SKP2-like proteins (ST) and CUL-1 in member of the illin/ CDC53 family of proteins. The method is useful for altering the vel of p27, cyclin E, Max, Mad, c-Myc, MDM2, p53, Bax, Bad or BG1-2 )lypeptide in a cell. SKP2 and SKP2-like protein levels are useful for tecting tumours, and in monitoring tumor treatment in a mammal. Agents eating tumours.
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                                                                                                                                                                                                                                             odulating polypeptide levels in a cell, diagnosing and treating tumor, wolves altering levels of proteins such as S-phase kinase associated coteins 1, 2 and cullin/CDC53 proteins -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 3027; DB 22; Length 569;
Pred. No. 1.2e-285;
0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                       Laim 3; Page 130-132; 162pp; English.
                                                                                                                                                                         Kondo
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                                                                                  5-JUN-2000; 2000WO-US15449.
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                                                                                                                                                                       lang H, Tsvetkov LM,
                                                                                                                                                                                                   2001-061703/07.
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                           J200075184-A1.
omo sapiens.
                                                                                                              1-JUN-1999;
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The present sequence is one of 251 novel human polypeptides encoded by a bone marrow-expressed polynucleotide. The polynucleotide and the polypeptide encoded by it are useful in the treatment of various immune deficiencies and disorders. The deficiences and disorders may be genetic, may be caused by a viral (e.g. HIV), bacterial or fungal infection, or may result from an autoimmune disorder, a coagulation disorder (e.g. heamophilia), inhibition of tumour cell proliferation, suppression of an inflammatory response or treatment of a nervous system disorder such as Alzheimer's disease. Detection of the presence or increased expression of the polynucleotide or the protein it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel bone-marrow-expressed polynucleotides and polypeptides, useful for treating e.g. cancer and immune deficiency disorders -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human, bone marrow; antiinflammatory; cytostatic; neuroprotective; antiviral; antibacterial; antifungal; anti-HIV; haemostatic; immunosuppressive; gene therapy; cytokine cell proliferation; cell differentiation modulator; immune disorder; infection; cancer; human immunodeficiency virus; HIV; autoimmune disorder; haemophilia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encodes is useful for the diagnosis and/or prognosis of one or more types of cancer. The polynucleotide and polypeptide can used as nutritional sources or supplements and in the screening chemical compounds as potential drugs.
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Y, Zhang
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e AJ, Yang
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1,4e-285;
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ang J, Werhman T, Xu C, Xue AJ,
Zhou P, Drmanac RT;
ILIMDFLNDPAAQAEPPRSPSRTYTYISR 569
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Cao Y, ng ZW;

Wang Xu C, R, Wa

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The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAW18313-AAW80302) that exhibit activity elating to cytokine, cell prollferation or cell differentiation or which may induce production of ther cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, hematopoiesis regulating activity, tissue growth factor activity, immunomodilatory activity and activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inflammation.

Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666

AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
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                                                                                                                                                                                                                                       Nucleic acids encoding polypeptides with cytokine-like activities, useful in diagnosis and gene therapy -
                                                                                   Drmanac RT, Asundi V, Zhou P,
Wang J, Zhang J, Ren F, Chen
Wejhrman T, Goodrich R;
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Pred. No. 1.5e-283;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                    Claim 20; Page 3503-3504; 6221pp; English
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94.0%;
30-NOV-2000; 2000US-0728422
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Best Local Similarity 94.0
Matches 569; Conservative
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N-PSDB; AAK51715.
                                                                                   Liu C, I
Wang D,
Yang Y, V
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                                           (HYSE-) HYSEQ INC
                                                                                   Tang YT,
Zhao QA,
Xue AJ,
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                                                                          40 MDPVEAVLQEKALKFFWNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA
                                                                                                                                                     .00 STAMKTENCVAKTKLANGISSMIVPKQRKISASYEKEKELCVKYFEQWSESDQVEFVEHL
                                                                                                                                                                                                                121 ISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIABNILSYLDAKSLCAABLVCKEWY
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                                        MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA
                                                                                                                               STAMKTENCVAKTKLANGTSSMIVPKORKLSASYEKEKELCVKYFEOWSESDQVEFVEHL
                                                                                                                                                                                                                                                                                                  RVISDGMLWKKLIERMVRIDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII
                                                                                                                                                                                                                                                                                                                                             RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII
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  Gaps
  6
  Indels
  Mismatches
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-UUN-2000; 2000US-0598075.
-UUL-2000; 2000US-0620325.
-SEP-2000; 2000US-0654935.
-SEP-2000; 2000US-0654561.
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  Conservative
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361

460 481 520

181 220 241 280 301

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36; Gaps

Indels

Length 605;

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569 TYISR 605

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QDIETIESNWRCGRHSLORIHCRSETSKGVYCLOYDDOKIVSGLRDNTIKIWDKNTLECK
                                                                                                  QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKSTLECK
                                                                                                                                                                                                     301 RILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNAGEMLNTLIHHCEAVLHLRFNNGMM
                                                                                                                                                                                                                                                                                                                                              EFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN
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                                                                                                                                                            RILIGHTGSVLCLQYDBRVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMM
                                                                                                                                                                                                                                                VICSKDRSIAVWDMASPIDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRIIKVWNISIC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Targeting degradation of polypeptide useful for treating cancer and other proliferative disorders, involves conjugating polypeptide with ubiquitin protein ligase or inhibiting ubiquitination using organic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The F-box proteins are a family of ubiquitin ligases (SCF ubiquitin ligases) which can be used for the targetted degradation of a target polypeptide in vivo. Targetted degradation is achieved by expressing the ubiquitin ligase in a cell linked to the interaction domain of the target polypeptide and thereby recruiting the target polypeptide to the ubiquitin ligase. Such methods are useful for decreasing or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ubiquitin ligase; SCF; F-box protein; targeted degradation; destabilisation; proteolysis; drug discovery; gene therapy; cancer; oncoprotein; Huntington's disease; gene knockout; delivery systems;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ILIWDFLNDPAAQAEPPRSPSRTYTYISR 569
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY83254 standard; Protein; 569
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                                                                \dot{\delta}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e present invention describes an F-box motif protein of ubiquitin gase SCF complex which promotes the ubiquitination of IkappaB or ta-carenin and is constituted by Skpl protein, Cull protein and a mplex (SCF complex) of F-box protein containing F-box motif and W040 peat motif and has the amino acid sequence of 45 residues (AAB12811) one of two 569 residue sequences (AAB12812, which is mouse ubiquitin gase FWDI protein) and (AAB12813, which is human beta-transducin egene therapy of colon cancer by being recombined to a virus vector.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
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                               541 APAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAQAEPPRSFSRTY 600
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  564
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                                                                                                                                                                                                                                                                                                                                                                                                                               oiquitin ligase SCF complex; F-box protein; ubiquitination; IkappaB; sta-catenin; Skp1; Cull; F-box motif; WD40 repeat motif; FWD1; ene therapy; colon cancer; beta-transducin repeat containing protein;
  APAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAQAEPPRSPSRTY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
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                                                                                                                                                                                                                                                                                                                                                                                    ouse ubiquitin ligase FWD1 protein SEQ ID NO:2.
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Pred. No. 1e-282;
3; Mismatches 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aim 2; Page 9-10; 19pp; Japanese
                                                                                                                                                                                                                                                  AB12812 standard; protein; 569
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2000-485550/43.

>2000166542-A.

-DEC-1998;)-JUN-2000

sulusaum st

PSDB; AAA73131

Similarity

561;

569 AA;

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reasing the level of a target polypeptide and for creating and xpressing a destabilized polypeptide which is subjected to SCF ediated proteolysis. Degrading any desired protein in a cell is setul for preventing or treating diseases caused by the presence of bnormal amount of the specific polypeptides, for drug discovery and or gene therapy. Diseases treated include cancer, by degradation of ncoproteins, Huntington's disease, other proliferative disorders and iternative to gene knockout technology. The target polypeptide can edegraded at all stages, or a specific stage, of development in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ature animal.
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569 AA; ednence

Gaps ., 98.8%; Score 2997; DB 21; Length 569; 98.6%; Pred. No. le-282; ive 3; Mismatches 5; Indels 0 hes 561; Conservative Similarity y Match Local

- ô 9 1 MDPABAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA
- 09 MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCINQETVCLT

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- 120 STAMKTENCVAKAKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL 120 STAMKTENCVAKTKLANGTSSMIVPKORKLSASYEKEKELCVKYFEQWSESDQVEFVEHL 61
- 180 ISOMCHYOHGHINSYLKPMLORDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY
 - ISOMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY 180 121
- 240 240 RVTSDGMLWKKLIBRMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDENAPPNSFYRALYPKII 181 181
- ODIETIESNWRCGRHSLORIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK 300 241
- QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKSTLECK 300 RILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLALRENNGNM 360 241 301
- 360 RILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNAGEMLNTLIHHCEAVLHLRFNNGMM 301
- 420 VICSKDRSIAVWDMASPIDIILRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC 420 VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC 361 361
- EFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIBCGACLRVLEGHEELVRCIRFDN 480 EFVRILNGHKRGIACLOYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN 480 421 421
- 540 KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT 540 481
- ILIWDFLNDPAAQAEPPRSPSRTYTYISR 569 541

iliwbflnbpahaepprspsrrrrisr

M78584 standard; Protein; 632

117 120

60

(first entry) -NOV-2001 nan protein SEQ ID NO 1246

nan; cytokine; cell proliferation; cell differentiation; gene therapy; schine; peptidde therapy; stem cell growth factor; haematopoiesis; ssue growth factor; immunomodulatory; cancer; leukaemia; rvous system disorder; arthritis; inflammation.

121 CLASTAMKTENCVAKTKLANGTSSMIVPKORKLSASYBKEKELCVKYFEQWSESDQVEFV 180 EWYRVISDGMLWKKLIERMVRIDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYP 300 The invention relates to polynucleotides (AAKS1456-AAKS3435) and the encoded polypeptides (AAMY8323-AAM80320). Intal exhibit a cativity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodiatory activity and activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and 2111 (AAK52582) and 3666 from the sequence listing CLASTAMKTENCVAKTKLANGTSSMIVPKORKLSASYBKEKELCVKYFEQWSESDQVEFV EHLISOMCHYOHGHINSYLKPMLORDFITALPARGLDHIAENILSYLDAKSLCAAELVCK EHLISQMCHYQHGHINSYLXPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCK EWYRVISDGMLWKKLIERMVRIDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYP 1 MDPABAVLQBKALKFMMEFRSWCPGWNTMARSRLTATSTSRVQCSMPRSLWLGCSSLADS 15 ------FMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETV Gaps polypeptides with cytokine-like activities C, Cao Y, Wang ZW; 63; DB 22; Length 632; Score 2992.5; DB 22; Lengt Pred. No. 3.3e-282; 0; Mismatches 0; Indels Tang YT, Liu C, Drmanac RT, Asundi V, Zhou P, Xu (Zhao QA, Wang D, Wang J, Zhang J, Ren F, Chen R, Xue AJ, Yang Y, Wejhiman T, Goodrich R; Note: Records for SEQ ID NO 2110 (AAK52581), (AAM80020) are omitted as the relevant pages were missing at the time of publication. Claim 20; Page 3505-3507; 6221pp; English. Nucleic acids encoding polypeptides w useful in diagnosis and gene therapy 98.6%; 2000US-0560875. 2000US-0598075. 19-JUL-2000; 2000US-0620325. 01-SEP-2000; 2000US-0654936. 15-SEP-2000; 2000US-0663561. 20-OCT-2000; 2000US-0693325. 30-NOV-2000; 2000US-0728422. 05-FEB-2001; 2001WO-US04098 1 MDPABAVLQEKALK--Conservative WPI; 2001-476283/51 Similarity 632 AA; (HYSE-) HYSEQ INC. N-PSDB; AAK51717 WO200157190-A2 27-APR-2000; 20-JUN-2000; 19-JUL-2000; inflammation. Homo sapiens 03-FEB-2000: Best Local Sim Matches 569; Sequence 181 58 118 178 Query Match a à g 셤 g ò ò à $\stackrel{>}{\circ}$

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                              KIIQDISTIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTL 360
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                                                                                                                                     ECKRILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCBAVLHLRFNN
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KIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTL
                                                                                               ECKRILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNN
                                                                                                                                                                                           GMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNT
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AM79566 standard; Protein; 654

(first entry) 5-NOV-2001 M79566

ıman protein SEQ ID NO 3212

uman; cytokine; cell proliferation; cell differentiation; gene therapy; accine; peptide therapy; stem cell growth factor; haematopoiesis; issue growth factor; immunomodulatory; cancer; leukaemia; irrous system disorder; arthritis; inflammation.

omo sapiens

3200157190-A2

·FEB-2001; 2001WO-US04098

-FEB-2000; 2000US-0496914.
-APR-2000; 2000US-0560875.
-UUN-2000; 2000US-0590075.
-UUL-2000; 2000US-063035.
-SEP-2000; 2000US-063561.
-SEP-2000; 2000US-063561.
-OCT-2000; 2000US-063325.

YSE-) HYSEO INC.

Cao 1 ZW; C, Cac Wang ж×, chen Asundi V, Zhou ang J, Ren F, C Drmanac RT, Asundi V, Wang J, Zhang J, Re Wejhrman T, Goodrich Liu C, Wang D, Yang Y, ng YT, ao QA, e AJ,

χ.

Μa

2001-476283/51 I; 2001-476283, PSDB; AAK52699 cleic acids encoding polypeptides with cytokine-like activities, eful in diagnosis and gene therapy -

aim 20; Page 285-286; 6221pp; English

e invention relates to polynucleotides (AAK51456-AAK53435) and the coded polypeptides (AAM78323-AAM80302) that exhibit activity elating to

237 ECKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNN 357 477 322 417 202 EHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCK 177 GMMVTCSKDRSIAVWDMASPIDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNT 502 cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polymucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides are useful in gene therapy, vaccines or e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissus growth factor activity, immunomodiatory activity and activity and activity and be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation.

Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication. 82 83 MPSLRCLYNPGTGALTAFQNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETV KIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTL PDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSH 23 MDPABAVLQEKALKFMMEFRSWCPGWNTMARSRLTATSTSRVQCSMPRSLWLGCSSLADS EWYRVISDGMLWKKLIERMVRIDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYP EWYRVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYP STCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLMDIECGACLRVLEGHEELVRCIR CLASTAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFV KIIQDIETIESNWRCGRHSLORIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTL STCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHBELVRCIR FDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSH CLASTAMKTENCVAKTKLANGTSSMIVPKORKLSASYBKEKELCVKYFEQWSESDQVEFV COMVICSKORSIAVWDMASPIDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRIIKVWNT ------NSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETV Gaps 98.5%; Score 2989.5; DB 22; Length 654; 89.9%; Pred. No. 6.9e-282; tive 1; Mismatches 0; Indels 63; 569 DDTILIMDFLNDPAAQAEPPRSPSRTYTYISR DDTILIWDFLNDPAQSEPPRSPSRTYTYISR 2003, 10:22:48 1 MDPAEAVLQEKALKFM-Best Local Similarity 89.9 Matches 568, Conservative completed: October 22, 654 AA; 263 238 298 383 443 17 58 143 118 203 323 358 478 Seguence 178 418 503 538 Query Match ò g g d d ò δ g à g δ g à 8 Db à 8 d ò qq 8

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61 STAMKTENCYAKTKLANGTSSMIVPKORKLSASYEKEKELCVKYFEQWSESDQVEFVEHL 120
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Sequence 2, Appli
Sequence 30, Appl
Sequence 30, Appl
Sequence 31, Appl
Sequence 21, Appli
Sequence 21, Appli
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Sequence 8, Appli
Sequence 16, Appl
                                                                                                                       October 22, 2003, 10:25:22 ; Search time 72 Seconds (without alignments) 1323.404 Million cell updates/sec
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Sequence 10,
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Sequence 10,
Sequence 14,
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1 MDPAEAVLQEKALKFMNSSE.....PAAQAEPPRSPSRTYTYISR
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ALIGNMENTS

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GENERAL INFORMATION:
APPLICANT: Manning, Anthony M.
APPLICANT: Marning, Anthony M.
APPLICANT: Marti, Sharon,
APPLICANT: Amit, Sharon,
APPLICANT: Ben-Nexiah, Yinon Q, APPLICANT: Ben-Nexiah, Yinon Q, APPLICANT: Barcubai, Ada
APPLICANT: Barcubai, Ada
APPLICANT: Harcubai, Ada
APPLICANT: Harcubai, Ada
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APPLICANT: Harcubai, Ada
APPLICANT: Harcubai, Ada
APPLICANT: Baron, Iris
APPLICANT: Baron, Avraham
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ACTIVATION OF
TITLE OF INVENTION: MARCUPATION NUMBER: 15/9/832,161
CURRENT APPLICATION NUMBER: 15/9/812,161
CURRENT APPLICATION NUMBER: 15/9/812-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MDPAEAVLQEKALKFWNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA
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US-09-832-161-18
; Sequence 18, Application US/09832161
; Publication No. US20030166587A1
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SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 18
LENGTH: 569
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US-10-038-010-8
Squence 8, Application US/10038010
Squence 8, Application US/10038010
Squence 9, Application No. US20030040089A1
GENERAL INFORMATION:
JAPPLICANT: HYBIGENICS
TITLE OF INVENTION: Protein-protein interactions in adipocyte cells
TITLE OF INVENTION: Protein-protein interactions in adipocyte cells
TITLE OF INVENTION: Protein-protein interactions in adipocyte cells
CURRENT FILING DATE: 2002-07-23
FRIOR APPLICATION NUMBER: US 60/259,377
PRIOR APPLICATION NUMBER: US 60/259,377
SPIOR APPLICATION NUMBER: US 60/259,377
NUMBER OF SEQ ID NOS: 67
SOFTWARE: Patentin version 3.1
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ORGANISM: Homo sapiens
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NAME/KEY: beta-TrCP1

LOCATION: (1)..(569)

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ication No. US20020123082A1
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ication No. USACOLIDENTINE AND DIFFERENTIATIVE DISORDERS
REFERENCE: 5314-030-939
REFERENCE: 5314-030-939
RETING DATE: 2002-01-07
RAPPLICATION NUMBER: 60/260,179
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61 STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL 120
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Local Similarity 100.
1es 569; Conservative
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VGTH: 569
PE: PRT
3ANISM: Homo sapiens
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239 ILQDIBTIBSNWRCGRHSLORIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLB
                               212 IIQDIETIESNWRCGRHNLQRIQCRSENSKGVYCLQYDDEKIISGLRDNSIKIWDKTSLE
                                                                                                               299 CKRILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNG
                                                                                                                                                                                                                               359 MMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTS
                                                                                                                                                                                                                                                                                                                                                  TCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRF
                                                                                                                                                                                                                                                                                                                                                                                       392 TCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRF
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US-10-023-530-2
Sequence 2, Application US/10023530
Publication No. US20030007956A1
GENERAL INFORMATION:
APPLICANT: LEGRALIN, Pierre
APPLICANT: BENGY, Gaillaume
APPLICANT: BLOY, Gaillaume
APPLICANT: LAGGST, Irina
ITLE OF INVENTION: PROTEINS THAT INTERACT WITH BETA TrCP
FILE REPERENCE: B471A
CURRENT APPLICATION NUMBER: US/10/023,530
CURRENT FILING DATE: 2002-04-22
PRIOR APPLICATION NUMBER: G0/256,276
PRIOR APPLICATION NUMBER: G0/256,276
PRIOR PILING DATE: 2000-12-18
NUMBER OF SEQ ID NOS: 30
SOFTWARE: Patentin version 3.1
LENGTH: 219
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Best Local Similarity 100.0%; Pred. No. 2.2e-106;
Matches 219; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       539 DIILIWDFLNDPAAQAEPPRSPSRTYTYISR 569
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; OTHER INFORMATION: F-box protein
US-10-023-530-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Homo sapiens
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LOCATION: (1) . (219
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541 ILIWDFLNDPAAQAEPPRSPSRTYTYISR 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ILIWDFLNDPAAQAEPPRSPSRTYTYISR 569
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Match

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 FMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLASTAMKTENCVAKTK 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LANGTSSMIVPKORKLSASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINS
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B. OF INVENTION: Nucleic Acids, Proteins, and Antibodies

REFERENCE: PT2082-0-10

ENT FILING DATE: 2002-08-16

R APPLICATION NUMBER: 10/116,016

R FILING DATE: 2001-0-10/116,016

R FILING DATE: 2001-0-10/116,016

R APPLICATION NUMBER: 60/179,065

R RILING DATE: 2000-01-31

R APPLICATION NUMBER: 60/180,628

R PILING DATE: 2000-01-31

R APPLICATION NUMBER: 60/121,487

R PILING DATE: 2000-02-04

R APPLICATION NUMBER: 60/217,487

R PILING DATE: 2000-01-11

R APPLICATION NUMBER: 60/220,963

R APPLICATION NUMBER: 60/220,963

R APPLICATION NUMBER: 60/220,963

R APPLICATION NUMBER: 60/220,963

R APPLICATION NUMBER: 60/220,963

R PILING DATE: 2000-07-16

R R FILING DATE: 2000-07-16

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R APPLICATION NUMBER: 60/217,496

R R FILING DATE: 2000-07-16

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R R FILING DATE: 2000-07-16
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                                                                                                                AL INPORMATION:
JICANT: Rosen et al.
JICANT: Rosen et al.
ROSEN ENTROM: Nucleic Acids, Proteins, and Antibodies
REFERENCE: PT208
REFERENCE: PT208
RENT FILING DATE: 2001-01-17
Number of a removed - consult PALM or file wrapper 3ER OF SEQ ID NOS: 53
FWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSLORIHCRSETSKGVYCLQYDDQKIVSGL 284
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                                                        ance 30, Application US/09764848 t No. US20020077270A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 68.9
les 186; Conservative
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PRIOR APPLICATION NUMBER: 60/218, 290
PRIOR FILING DATE: 2000-08-12
PRIOR FILING DATE: 2000-08-22
PRIOR FILING DATE: 2000-08-22
PRIOR PADLICATION NUMBER: 60/226, 868
PRIOR PLING DATE: 2000-08-22
PRIOR APPLICATION NUMBER: 60/216, 647
PRIOR PRIOR DATE: 2000-08-14
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DB 15; Length 265;

32.6%; Score 989.5;

APPLICATION NUMBER: 60/236,802 FILING DATE: 2000-10-02 APPLICATION NUMBER: 60/237,037 FILING DATE: 2000-10-02 APPLICATION NUMBER: 60/237,040 FILING DATE: 2000-10-02 FILING DATE: 2000-10-02
APPLICATION WINBER: 60/240,960
FILING DATE: 2000-10-20
APPLICATION NUMBER: 60/239,935 APPLICATION NUMBER: 60/241,787 FILING DATE: 2000-10-20 FILING DATE: 2000-10-20 APPLICATION NUMBER: 60/246,474 APPLICATION NUMBER: 60/246,532 APPLICATION NUMBER: 60/249,216 FILING DATE: 2000-11-17 APPLICATION NUMBER: 60/249,210 FILING DATE: 2000-11-17 APPLICATION NUMBER: 60/226,681 FILING DATE: 2000-08-22 APPLICATION NUMBER: 60/225,759 APPLICATION NUMBER: 60/225,213 APPLICATION NUMBER: 60/227,182 FILING DATE: 2000-08-22 APPLICATION NUMBER: 60/225,214 APPLICATION NUMBER: 60/235,836 APPLICATION NUMBER: 60/230,438 PLICATION NUMBER: 60/215,135 PLICATION NUMBER: 60/225,266 APPLICATION NUMBER: 60/249,218 FILING DATE: 2000-11-17 APPLICATION NUMBER: 60/249,208 FILING DATE: 2000—11-17
APPLICATION NUMBER: 60/249,213
FILING DATE: 2000—11-17
APPLICATION NUMBER: 60/249,212
FILING DATE: 2000—11-17 FILING DATE: 2000-11-17
APPLICATION NUMBER: 60/249,245 LING DATE: 2000-11-17 PLICATION NUMBER: 60/249,244 APPLICATION NUMBER: 60/249,215 APPLICATION NUMBER: 60/249,264 APPLICATION NUMBER: 60/249,214 APPLICATION NUMBER: 60/249,297 APPLICATION NUMBER: 60/232,400 CATION NUMBER: 60/231,242 APPLICATION NUMBER: 60/239,937 PLICATION NUMBER: 60/249,207 APPLICATION NUMBER: 60/249,217 APPLICATION NUMBER: 60/249,211 2000-11-08 2000-08-14 2000-08-14 0000-10-13 000-08-14 90-60-000 2000-08-14 000-09-2 LING DATE: LING DATE: LING DATE: LING DATE: LING DATE:

43 ISNGTSSVIVSRKRPSEGNYQKEKDLCIKYFDQWSESDQVEFVEHLISRMCHYQHGHINS 102 42 15 FMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLASTAMKTENCVAKTK 74 75 LANGTSSMIVPKORKLSASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINS 135 YLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIE 195 RMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGR 103 YLKPMLQRDFITALPEQGLDHIAENILSYLDARSLCAAELVCKEWQRVISEGMLWKKLIE 32.6%; Score 989.5; DB 12; Length 265; 68.9%; Pred. No. 4.1e-89; tive 24; Mismatches 21; Indels 39; Sequence 30, Application US/10116016;
Publication No. US20030054379A1;
Sequence 30, Application US/10116016;
Publication No. US20030054379A1;
SEMERAL INPORMATION:
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies;
FILE REFERENCE: PIZO8C1;
CURRENT APPLICATION Nucleic US/10/116,016;
CURRENT APPLICATION TEMOVEd - See File Wrapper or Palm;
NUMBER OF SEQ ID NOS: 53
NUMBER OF SEQ ID NOS: 53
SOFFWARE: PatentIn Ver. 2.0
SEQ ID NO 30
LENGTH: 265
TYPE: PRT
TYPE: PRT
CURRENT: Homo sapiens
US-10-116-016-30 255 HSLQRIHCRSETSKGVYCLQYDDQKIVSGL 284 20 FONTSVMEDONEDESPK----KNTLWO-PRIOR APPLICATION NUMBER: 60/23, 080
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR FILING DATE: 2000-09-08
PRIOR PILING DATE: 2000-09-08
PRIOR PILING DATE: 2000-09-08
PRIOR PLING DATE: 2000-09-08
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PRIOR APPLICATION NUMBER: 60/23, 39
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PRIOR PILING DATE: 2000-10-20
PRIOR PILING DATE: 2000-10-20 OR APPLICATION NUMBER: 60/233,064
OR FILING DATE: 2000-09-14
OR APPLICATION NUMBER: 60/233,063
OR PILING DATE: 2000-09-14
NR APPLICATION NUMBER: 60/232,397
NR APPLICATION NUMBER: 60/232,397 Query Match
Best Local Similarity 68.9
Matches 186; Conservative US-10-116-016-30 Q d qq 요 δ δ ò ò ò

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                                                                                                                                           381 STVRCMHLHEKRVVSGSRDATLRVWDIETGQCL---HVLMGHVAAVRCVQYDGRRVVSGA 437
                                                                                                                                                                                                               GDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLE 467
                                                                                                                                                                                                                                              438 YDFMVKVWDPETETCLHTLQGHTNRVYSLQFDGIHVVSGSLDTSIRVWDVETGNCIHTLT 497
                                                                                                                                                                                                                                                                                                                                                                              498 GHQSLTSGMELKDNILVSGNADSTVKIWDIKTG------QCLQTLQGPNKHQSAVTC 548
  288 TIKIWDKNTLECKRILTGHTGSVLCLQYDBRVIITGSSDSTVRVWDVNTGEMLNTLIHHC 347
                                                                                                         348 EAVLHIRPINGMAVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSAS 407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-328-877A-21

Sequence 21, Application US/09328877A

Sequence 22, Application US/09328877A

Sequence 21, Application US/09328877A

Sequence 21, Application US/09328877A

Sequence 21, Application

Sequence 21, Application

Sequence 21, Application

APPLICANT: Gurney, Mark E.

APPLICANT: Li, Jinhe

APPLICANT: Palley, Adele M.

TITLE OF INVENTION: Huwan Sel-10 Polypeptides and Polymucleotides that

TITLE OF INVENTION: Encode Them

FILE REPERENCE: 6142

CURRENT APPLICATION NUMBER: US/09/328,877A

CURRENT FILING DATE: 1999-06-09

NUMBER OF SEQ ID NOS: 27

SOOTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                           468 GHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLV---EHSGRVFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 LOBKALKFMNSSEREDCNNGEPPRKIIPEK--NSLRQ--TYNSCARLCLNGETVCLASTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          53 MEQKLISBEDLNEMESLGDLTMEQKLISBEDLNSMKRKLDHGSEVRSFSLGKKPCKVSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64 MKTENCV-----AKTKLANGTSSMIVPKORKLSASYEKEKEL--CVKYFEQWSESD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) OTHER INFORMATION: Description of Artificial Sequence:
, OTHER INFORMATION: homo sapien
US-09-328-877A-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 549 LOFNKNFVITSSDDGTVKLWD 569
                                                                                                                                                                                                                                                                                                                                                                                                                                    525 LQFDEFQIVSSSHDDTILIWD 545
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                                                                               15 PMNSSEREDCHNGEPPRKIIPEKNSIRQTYNSCARLCLNQETVCLASTAMKTENCVAKTK 74
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JICANT: Gurney, Mark E.
JICANT: Dauley, Adele M.
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                            Indels
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IER INFORMATION: homo sapien
213-888-21
  68.9%; Pred, No. 4.1e-89;
ive 24; Mismatches 21
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it No. US20020164683A1
tAL INFORMATION:
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Local Similarity
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Query Match 21.1%; Score 640; DB 10; Best Local Similarity 30.8%; Pred. No. 4.1e-54; Matches 167; Conservative 92; Mismatches 211;
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US-09-213-888-10
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US-09-213-888-10
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EAVLHLRFNNGMMVTCSKDRSIAVWDMASPIDITLRRVLVGHRAAVNVVDFDDKYIVSAS 407
                                                                                                                                                                                                                                                                               GHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLV---EHSGRVFR 524
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JICANT: Li, Jinhe
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JICANT: Bauley, Adele M.
JICANT: Pauley, Adele M.
JICANT: Pharmacia & Upjohn Company
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Local Similarity 30.8%; Pred. No. 4.1e-54;
es 167; Conservative 92; Mismatches 211; Indels 7
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LQFNKNFVITSSDDGTVKLWD 569
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ANISM: Homo sapiens
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APPLICANT: Gurney, Mark E.
APPLICANT: Gurney, Mark E.
APPLICANT: Li, Jinhe
APPLICANT: Paraley, Adele M.
APPLICANT: Paramacia & Upon Company
TITLE OF INVENTION: Human Sel-10 Polypeptides and Polynucleotides that
TITLE OF INVENTION: Encode Them
FILE REFERENCE: 6142
CURRENT APPLICATION NUMBER: US/09/213,888A
CURRENT PILING DATE: 1998-12-17
NUMBER OF SEQ ID NOS: 27
SOFFWARE: Patentin Ver. 2.0
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ORGANISM: Homo sapiens
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LICANT: Bulley, Mark E.
LICANT: Bulley, Adele M.
LICANT: Pharmacy, Adele M.
LICANT: Pharmacy, Adele M.
LICANT: Pharmacy, Adele M.
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LICANT: Pharmacy, Adele M.
LICANT: PARTICON: Encode Them
3 REFERENCE: 6142
3 REFERENCE: 6142
5 REFERENCE: 1999-06-09
5 REFERENCE: 1999-06-09
5 ROADE: 27
6 WARE: PARTICON WEY: 2.0
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                                                                                                                        ence 7, Application US/09328877A nt No. US20020177187A1
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nes 167; Conservative
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                                                 GENERAL INFORMATION:
APPLICANT: Gurney, Mark E.
APPLICANT: Li, Jinhe
APPLICANT: Li, Jinhe
APPLICANT: Pauley, Adele M.
APPLICANT: Pauley, Adele M.
APPLICANT: Pharmacia & Upjohn Company
ITLE OF INVENTION: Human Sel-10 Polypeptides and Polynucleotides that
ITLE OF INVENTION: Encode Them
FILE REPERRACE: 6142
CURRENT FILING DATE: 1999-06-09
NUMBER OF SEQ ID NOS: 27
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 10
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21.1%; Score 640; DB 10; I
Best Local Similarity 30.8%; Pred. No. 4.1e-54;
Matches 167; Conservative 92; Mismatches 211;
Sequence 10, Application US/09328877A Patent No. US20020177187A1
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LICANT: Strohmajer, Heimo
LICANT: Spruck, Charles
LICANT: Sangfelt, Ole
LICANT: Sangfelt, Ole
LE OF INVENTION: HCDO:
LE OF INVENTION: HCDO:
RENT APPLICATION NUMBER: US/10/245,618
RENT APPLICATION NUMBER: US 60/404,116
OR FILING DATE: 2002-09-16
OR PILING DATE: 2002-09-16
OR PILING DATE: 2001-09-14
BER OF SEQ ID NOS: 48
BER OF SEQ ID NOS: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATURE:
HER INFORMATION: Synthesized
245-618-14
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NGTH: 540
PE: PRT
GANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                                               RESULT 1
US-08-190-802A-30

; Sequence 30, Application US/08190802A
; Patent No. 5519003
; GENERAL INFORMATION:
; APPLICANT: Moorit
; TITLE OF INVENTION: WD-40 - Derived Peptides and Uses:
; TITLE OF INVENTION: Thereof
; TITLE OF INVENTION: Thereof
; TITLE OF INVENTION: Thereof
; TITLE OF INVENTION: Thereof
; NUMBER OF SEQUENCES: 265
; CORRESPONDENCE ADDRESS:
. ADDRESSEE: Dehlinger & Associates
STREET: P.O. Box 60850
CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STAILS: USA

ZIP: 94306-0850

COUNTER READABLE FORM:
MEDIUW TYPE: FLOPPY disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PLOPPY disk
COMPUTER: PLOPPY disk
COMPUTER: PLOPS/MS-DOS
SOFTWARE: PATCHIN PC-DOS/MS-DOS
SOFTWARE: PATCHIN DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/190,802A
TLING DATE: 01-FEB-194
CLASSIFICATION: 530
ATTORNEY/AGENT IMPORMATION:
REGISTRATION NUMBER: 33,875
REFERENCE/DOCKET NUMBER: 8600-0139
TELEFAX: (415) 324-0860
INFORMATION FOR SEQ ID NO: 30:
SEQUENCE CHARACTERISTICS:
LENGTH: 517 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: AMINO acids
TYPE: AMINO acids
; ORIGINAL SOURCE:
; INDIVIDUAL ISOLATE: BETA TRCP, Fig. 13
US-08-190-802A-30
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HYPOTHETICAL: NO
ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown
     Query Match
Best Local Simi
Matches 487;
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                                                                                                                                 October 22, 2003, 10:21:24 ; Search time 30 Seconds (without alignments) 802.496 Million cell updates/sec
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Sequence 32,
Sequence 32,
Sequence 32,
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('GgnZ_6'ptodata/2'iaa/5B_COMB.pep:*

('GgnZ_6'ptodata/2'/iaa/6A_COMB.pep:*

('GgnZ_6'ptodata/2'iaa/6B_COMB.pep:*

('GgnZ_6'ptodata/2'iaa/BECOMB.pep:*

('GgnZ_6'ptodata/2'iaa/PCTUS COMB.pep:*
                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-08-477-165A-30
US-08-177-165A-30
US-08-190-802A-32
US-08-190-802A-32
US-08-477-346-32
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US-08-190-802A-32
US-08-190-802A-51
US-08-961-716-3
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US-08-973-089-6
US-08-973-089-6
US-08-477-346-66
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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3034
1 MDPAEAVLQEKALKFMNSSE.
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DB seq length: 200000000
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Match Length DB
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ANTI-SENSE: NO
ORIGINAL SOURCE:
INDIVIDUAL ISOLATE: BETA TRCP, Fig. 13
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Patent No. 6342368
GENERAL INFORMATION:
APPLICANT: Mochly-Rosen, Daria
APPLICANT: Ron, Dorit
TITLE OF INVENTION: WD-40 - Derived
TITLE OF INVENTION: Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000 Pennsylvania Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Morrison & Foerster
                      LENGTH: 517 amino acids TYPE: amino acid
     SEQUENCE CHARACTERISTICS:
                                               TOPOLOGY: unknown
MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morrison
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Matches 487; Conserv
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US-08-473-089-30
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                    -TKLAN 42
                                                                                                                                      QRIHCRSETSKGVYCLQYDDQKIVSCLRDNTIKIWDKNTLECKRVLMGHTGSVLCLQYDB
                                                                                                                                                                                                                                                                                                                                                                                                      GTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLK
                                                                                                                    PMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMV
                                                                                                                                                                                 RIDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSL
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t No. 6262023
RAL INFORMATION:
PLICANT: Mochly-Rosen, Daria
PLICANT: Ron, Dorit
TLE OF INVENTION: WD-40 - Derived Peptides and Uses
TLE OF INVENTION: AP-60-6
RRESPONDENCES: 265
RRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: ....
STATE: DC
COUNTRY: USA
ZIP: 20006-1812
MPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
RRENT APPLICATION DATA: US/08/477,346
APPLICATION NUMBER: US/08/477,346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOSEPH CALLION: 314

APPLICATION DATA:
APPLICATION NUMBER: 08/487,072
FILING DATE: 07-20N-1995
FILING DATE: 07-20N-1995
FORNEY AGENT INFORMATION:
VAME: MURASHIGE, KATE H.
SEGISTRATION NUMBER: 25-50-0025.20
LECOMMUNICATION INFORMATION:
FELERPORE (202) 887-1500
FELERPORE (202) 887-1500
FELERRYK' (202) 887-0763
WAATION FOR SEQ ID NO: 30:
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STREET: 2000 Pennsylvania Avenue,
CITY: Washington
                   ASEREDCINEDEPPRKI I TEKNTLRO
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77-346-30
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                                                                                                                                   18 SSEREDCHNGEPPRKIIPEKNSIRQTYNSCARLCINQETVCLASTAMKTENCVAKTKLAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSL
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                                                                            Gaps
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85.1%; Score 2582.5; DB 3; Length 517; ilarity 91.4%; Pred. No. 3.1e-266; Conservative 7; Mismatches 8; Indels 31:
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                                                                                                                                                                            STREET: 2000 Pennsylvania Avenue, CITY: Washington STATE: DC CCUNTRY: USA ZIP: 2006-1812 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPATING SYSTEM: PC-DOS/MS-DOS
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SOFTWARE:

73-089-30

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GTSSMIVPKQRKLSASYEKELCVKYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLK 137
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PMLQRDFITALPARGLDHIAENILSYLDAKSLCSAELVCKEWYRVTSDGMLWKKLIERMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIDSLWRGLAERRGWGOYLFKNKPPDGNAPPNSFYRALYPKIIODIETIESNWRCGRHSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            163 RIDSLWRGLAERRGWGQYLFKNKPPDGKTPPNSFYRALYPKIIQDIETIESNWRCGRHSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                223 QRIHCRSETSKGVYCLQYDDQXIVSGLRDNTIKIWDKNTLECKRVLMGHTGSVLCLQYDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                378 IDITLRRULVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQ
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                                                                                      COUNTRY: DOUGH Pennsylvania Avenue, NW
STREET: 2000 Pennsylvania Avenue, NW
STREET: 2000 Pennsylvania Avenue, NW
STATE: DC
COUNTRY: USA
ZIP: 2006-1812
COMPUTER: DC
COMPUTER: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PAPELICATION DATA:
APPLICATION NUMBER: US/08/487,072A
FILING SYSTEM: PC-DOS/MS-
CURRENT APPLICATION DATA:
APPLICATION NUMBER: 250-0025.20
FILING ACENT INFORMATION:
NAME: MURASHIGE, KATE H.
REFERENCE/DOCKET NUMBER: 2550-0025.20
TELECOMMULICATION INFORMATION:
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TITLE OF INVENTION: Thereof NUMBER OF SEQUENCES: 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : 517 amino acids
amino acid
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MOLECULE TYPE: peptide
HYPOTHETICAL: NO
                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTI-SENSE: NO
ORIGINAL SOURCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         103 PMLQRDFITALPARGLDHIAENILSYLDAKSLCSAELVCKEWYRVTSDGMLWKKLIERMV 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          257
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASP 377
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         401
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           163 RIDSLWRGLAERRGWGQYLFKNYRPPDGKTPPNSFYRALYPKIIQDIETIESNWRCGRHSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18 SSEREDCHNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLASTAMKTENCVAKTKLAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   198 RIDSLWRGLAERRGWGOYLFKNKPPDGNAPPNSFYRALYPKIIODIETIESNWRCGRHSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342 TDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          438 YRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                402 YRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDL
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Local Similarity 91.4%; Pred. No. 3.1e-266;
es 487; Conservative 7; Mismatches 8; Indels 31;
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87-072A-30
nce 30, Application US/08487072A
t No. 6423684
RAL INFORMATION:
PLICANT: Mochly-Rosen, Daria
PLICANT: Ron, Dorit
TLE OF INVENTION: WD-40 - Derived Peptides and Uses
Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13 ASEREDCNRDEPPRKITTERNTLRO-----
                                                                                                                            CLASSIFICATION: 435
CLASSIFICATION: 435
CLASSIFICATION: 435
NAME: MUTABAILGE, KAITE H.
REGISTRATION NUMBER: 29,959
REGISTRATION NUMBER: 29,959
LECOMMUNICATION INFORMATION:
TELEPHONE: (202) 887-1500
TELEPAR: (202) 887-1500
CUENCE CHARACTERISTICS:
CUENCE CHARACTERISTICS:
AMATION FOR SEQ ID NO: 30:
QUENCE CHARACTERISTICS:
TYPE: amino acids
TYPE: amino acids
TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IGINAL SOURCE:
INDIVIDUAL ISOLATE: BETA TRCP, Fig. 13
                               RRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/473,089
FILING DATE: 07-4UN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LECULE TYPE: unknown
LECULE TYPE: peptide
POTHETICAL: NO
TI-SENSE: NO
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138

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Gaps

77 42 102 197 162

318

378

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            263 QIHDDVLVTGSDDNTLKVWCIDKGEVMYTLVGHTGGVWTSQISQCGRYIVSGSTDRTVKV 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDR--LVVSGSSD 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDE--RVIITGSSDSTVRV 331
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          228 PN-SFYRALYPKIIQDI------ETIESNWRCGRHSLQRIHCRSETSKGVYCL
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                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Cooper & Dunham LLP
STREET: 1185 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036
COMPUTER READBALE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Patentin Release #1.0, Version #1.30
SOFTWARE: Patentin NaTease #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/899,578
FILING DATE: 24-UL-1997
CLESTERM APPLICATION A.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 0575/53200/JPW/AKC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 278-0400
TELEFAX: (212) 278-0400
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                                                                                                          Sequence 2, Application US/08899578
Patent NO. 6087153
GNERAL INFORMATION:
APPLICANT: Greenwald, Iva
APPLICANT: Hubbard, B. Jane
TITLE OF INVENTION: SEL-10 AND USES THEREOF
NUMBER OF SEQUENCES: 7
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Best Local Similarity 28.8
Matches 150; Conservative
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ADDRESSEE: Cooper &
                                   RESULT 6
US-08-899-578-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        292 --HCRIQBFKGHMDGVLTLQFNYKLLFTGSYDSTIGIWDLFTGKLIRRLSGHSDGVKTLY 349
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  375 ASPIDITLRRVLVGHRAAVNVVDFDDKYI--VSASGDRTIKVWNTSTCEFVRTLNGH--- 429
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526 LSCGLDNTIKLWDVKTGKCIRTQFGHVEGVWDIAADNFRIISGSHDGSIKVWDLQSG--- 582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            146 NSNDKIRKL-------ILDGILSTSCFPQLSYISSLVTHMIKIDFISILP-- 188
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                                                                                                                                                                                                                                                                                                                                                                                                 JUGNIT: Tyers, Mike
JICANT: Willems, Andrew
JICANT: Willems, Andrew
JICANT: Willems, Andrew
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JECANTON: WILLENSENT PROTECLYSIS
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JENT FILING DATE: 1998-07-10
JENT FILING DATE: 1998-07-10
JENT APPLICATION NUMBER: 60/063,254
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 IPEKNSLRQTYNGCARLCLN-QETVCLASTAMKTENCVAK-TKLANGTSSMIVPKQRKLS
                                                VAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDP
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                                                                                                                                                                                                                                                                         ence 30, Application US/09177165A
nt No. 6426205
RAL INFORMATION:
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177-165A-30
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Gaps

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396 VDFDD----KYIVSASGDRTIKVWNT--------------------FVRTLNG 428
                                                                                                                                                                                                                                                                                                                   429 HKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN--KRIVSG 486
                                                                                                                                                                                                                                                                                                                                                 589 SMDTTIRIWDLENIWNNGECSYATNSASPCAKILGAMYTLQGHTALVGLLRLSDKFLVSA 648
                                                                                                                      336 TGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV 395
                                                                                                                                                                      ------HVFEGHNSTVRC 468
                         277 DQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDE-RVIITGSSDSTVRVWDVN 335
                                                                      392 DNYVITGADDKMIRVYDSINKKFLLQLSGHDGGVWALKYAHGGILVSGSTDRTVRVWDIK 451
                                                                                                                                                                                                                                                                                                                                                                                                                487 AYDGKIKVWDL-----VAALDPRAPAGTL--CLRTLVEHSGRVFRLQFDEFQIVSS
                                                                                                                                                                                                                                                              469 LDIVEYKNIKYIVTGSRDNTLHVWKLPKESSVPDHGEEHDYPLVFHTPEENPYFVGVLRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Mochly-Rosen, Daria
APPLICANT: Ron, Doriv
TITLE OF INVENTION: WD-40 - Derived Peptides and Uses
TITLE OF INVENTION: Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: DC.
COUNTRY: USA
ZIP: 2000-1812
COMPUTER: EDGE-1812
COMPUTER: TEMBABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/477,346
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
PRIOR APPLICATION NUMBER: 08/487,072
FILING APPLICATION NUMBER: 07-JUN-1995
ATPONDENT NUMBER: 07-JUN-1995
ATPONDENT INFORMATION:
MANNE WITH STATES ATPLICED FAMILY INFORMATION:
MANNE WITH STATES ATPLICED FAMILY NUMBER: 07-JUN-1995
ATPLICATION NUMBER: 07-JUN-1995
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ATPLICATION NUMBER: 07-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           536 SHDDTILIWDFLNDPAAQAEPPRSPSRTYTY 566
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STREET: 2000 Pennsylvania Avenue,
CITY: Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: MURASHIGE, KATE H.
REGISTRATION UNDMER: 29,950-
REFERENCE/DOCKET NUMBER: 2550-
TELECOMMUNICATION INFORMATION:
TELEPONE: (202) 887-1500
INFORMATION FOR SEQ ID NO: 32:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       : 779 amino acids
amino acid
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Morrison & E
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INDIVIDUAL ISOLATE:
US-08-477-346-32
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,450 NTIRLWDI----ECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAP 506
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                                               440 TSİRVWDFTRPEGQECVALLQGHTSLTSGMQLRGNILVSCNADSHVRVWDI-
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                                                                                                                                                                                                                                                    The 32, Application US/08190802A
t No. 5519003
RAL INFORMATION:
PLICANT: Mochly-Rosen, Daria
PLICANT: Ron, Dorit
TLE OF INVENTION: WD-40 - Derived Peptides and Uses
RAESPONDENCE S. 265
RRESPONDENCE ADRESS:
                                                                                                                                     EGT-CVHMLSGHRSAITSLQWFGRNMVATSSDDGTVKLWD 530
                                                                                               507 AGTLCLRTLVEHSGRVFRLQ-FDEFQIVSSSHDDTILIWD 545
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SOFTWARE: Patentin Release #1.0, Version #1.25
STRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/190,802A
FILING DATE: 01-FEB-1994
CLASSIFICATION: 530
TORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     295 IINSLGVSQNWNKIIRKSTSLWKKLLISENFV-----
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Dehlinger & Associates
STREET: P.O. Box 60850
CITY: Palo Alto
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Fabian, Gary R.
REGISTRATION NUMBER: 33,875
REFERENCE/DOCKET NUMBER: 8600-
LECOMMUNICATION INFORMATION:
TELEPHONE: (415) 324-0860
TELEPRAX: (415) 324-0960
RMATION FOR SEQ ID NO: 32:
QUENCE CHARACTERISTICS:
LENGTH: 779 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
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Local Similarity 24.39
es 139; Conservative
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MPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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IGINAL SOURCE:
INDIVIDUAL ISOLATE:
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                                                                                                                                                                                    245 -----NLLFRLVANMDRSELSDLGTLIKDNLKRDLITSLPF----EISLKIFNYLQFED
                                                                            56 TVCLASTAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEK-----ELCVKYFEQW
                                                                                                                   194 TTPLAKTTKTINN-----NNNIADLIESKOSIISPEYLSDEIFSAINNNLPHAYFK--
                                                                                                                                                                                                                                    169 LCAAELVCKEWYR-VTSDGMLWKKLI--ERMVRTDSLWRGLAERRGWGQYLFKNKPPDGN
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13.2%; Score 399; DB 3; Length 779;
24.3%; Pred. No. 3.8e-33;
.ive 80; Mismatches 196; Indels 156; Gaps
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73-089-32
rce 32, Application US/08473089
t No. 6342368
RAL INFORMATION:
PLICANT: Mochly-Rosen, Daria
PLICANT: Ron, Dorit
TILE OF INVENTION: Who 40 - Derived Peptides and Uses
MBER OF SEQUENCES: 265
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RRENT APPLICATION DATA:
**PPLICATION NUMBER: US/08/473,089
**ILING DATE: 0-JUN-1995
**ILING DATE: 0-JUN-1995
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STREET: 2000 Pennsylvania Avenue, NW
SITY: Washington
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APUTER READABLE FORM:
ABDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
DPERATING SYSTEM: PC-DOS/MS-DOS
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                    Local Similarity 24.3
es 139, Conservative
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STATE: DO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109 SESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 169 LCAAELVCKEWYR-VTSDGMLWKKLI--ERMVRTDSLWRGLAERRGWGQYLFKNKPPDGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----STCE----FVRTLNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             13.2%; Score 399; DB 4; Length 779; 24.3%; Pred. No. 3.8e-33; Live 80; Mismatches 196; Indels 1
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APPLICANT: Ron, Dorit
TITLE OF INVENTION: WD-40 - Derived Peptides and Uses
NUMBER OF SEQUENCES: 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                295 IINSLGVSQNWNKIIRKSTSLWKKLLISENFV------
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                                                                 2550-0025.22
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NAME: MURASHIGE, KATE H.
REGISTRATION NUMBER: 29,959
REFRENCE/DOCKET NUMBER: 2550
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 887-1500
TELEFAX: (202) 887-0763
INFORMATION FOR SEQ ID NO: 32:
LENGTH: 779 amino acids
TYPE: amino acid
TOPPLOSY: unknown
TOPPLOSY: unknown
KATE H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 24.3
Matches 139; Conservative
                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein HYPOTHETICAL: NO
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                                                                                                                                                                                                                                                                                                                                     ANTI-SENSE: NO
ORIGINAL SOURCE:
INDIVIDUAL ISOLATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56 TVCLASTAMKTENCVAKTKLANGTSSMIVPKQRKLSASYBKEK------ELCVKYFEQW 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LDIVEYKNIKYIVTGSRDNTLHVWKLPKESSVPDHGEEHDYPLVFHTPEENPYFVGVLRG 528
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 SESDQVEFVEHLISQMCHYQHGHINSYLKPWLQRDFITALPARGLDHIAENILSYLDAKS 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277 DOKIVSGLRDNTIKIMDKNTLECKRILIGHTGSVLCLQYDE-RVIITGSSDSTVRVMDVN 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGEMINILIHHCEAVIHLRFNNGMMVTCSKDRSIAVWDMASPIDITLRRVLVGHRAAVNV 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      396 VDFDD----KYIVSASGDRIIKVWNT--------STCE----FVRTLNG 428
  589 SMDTTIRIWDLENIWNNGECSYATNSASPCAKILGAMYTLQGHTALVGLLRLSDKFLVSA 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             226 APPNSFYRALYPKIIQD-----IET--IESNWRCGRHSLQRIHCRSETSKGVYCLQYD 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               332 NSINLKISQKYPKLSQQDRIRLSFLENIFILKNWYNPKFVPQRTTLRGHMTSVITCLQFE 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ------HVFKGHNSTVRC 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----NLLFRLVANMDRSELSDLGTLIKDNLKRDLITSLPF----BISLKIFNYLQFED 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295 IINSLGVSQNWNKIIRKSTSLWKKLLISENFV---------SPKGF 331
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         194 TIPLAKITKIINN------NNNIADLIESKDSIISPEYLSDEIFSAINNNLPHAYFK--
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
13.2%; Score 399; Daw; Deugen 1...,
Best Local Similarity 24.3%; Pred. No. 3.8e-33;
Matches 139; Conservative 80; Mismatches 196; Indels 156; Gaps
                                                                                                                                                                                                                                                                                                APPLICANT: Tyers, Mike
APPLICANT: Tyers, Mike
APPLICANT: Tyers, Mike
APPLICANT: Willems, Andrew
TITLE OF INVENTION: DEPENDENT PROTECLYSIS
FILE REPERENCE: 11757.10USU1
CURRENT APPLICATION NUMBER: US/09/177,165A
CURRENT APPLICATION NUMBER: US/09/177,165A
PRIOR PILING DATE: 1998-07-10
PRIOR PELING DATE: 1998-07-10
PRIOR PELING DATE: 1998-07-10
PRIOR PILING DATE: 1997-10-24
NUMBER OF SEQ ID NOS: 50
SOFTWARE: PATCHIN VET: 2.1
                                                    536 SHDDTILIWDFLNDPAAQAEPPRSPSRTYTY 566
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                                                                                                                                                                                                                              Sequence 29, Application US/09177165A Patent No. 6426205
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ORGANISM: Saccharomyces cerevisiae
                                                                                                 649 AADGSIRGWD-AND
                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                   US-09-177-165A-29
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LENGTH: 779
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    391
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      336 TGEMLNTLIHHCEAVLHLRFNNGMMYTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     452 KG-----HVFEGHNSTVRC 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----STCE----FVRTLNG 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN--KRIVSG 486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              487 AYDGKIKVWDL-----VAALDPRAPAGTL--CLRTLVEHSGRVFRLQFDEFQIVSS 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245 ----NLLFRLVANMDRSELSDLGTLIKDNLKRDLITSLPF----EISLKIFNYLQFED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332 NSINIKISQKYPKLSQQDRLRISFLENIFILKNWYNPKFVPQRTTLRGHMTSVITCLQFE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           194 TTPLAKTTKTINN-----NNNIADLIESKDSIISPEYLSDEIFSAINNNLPHAYFK--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109 SESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKS
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Local Similarity 24.3%; Pred. No. 3.8e-33;
es 139; Conservative 80; Mismatches 196; Indels 156;
                                                                                                                                                                                                                                                                      GOFTWARE: Patentin Release #1.0, Version #1.25
RIKENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,072A
TELING DATE: 07-JUN-1995
CLASSIFICATION: 514
TORNEY/AGENT INFORMATION:
NAME: WIRAAHIGE, KATE H.
REGISTRATION NUMBER: 29,959
REFERENCE/DOCKET NUMBER: 29,959
TELEPHONE: (202) 887-1500
TELEPHONE: (202) 887-1500
TELEPHONE: (202) 887-1500
RMATION FOR SEQ ID NO: 32:
QUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IGINAL SOURCE:
INDIVIDUAL ISOLATE: CDC4 / CDC20 protein, Fig. 15
87-072A-32
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                                                  2000 Pennsylvania Avenue, NW
                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                             Foerster
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                                                                                                                                               ZIP: 20006-1812
MPUTER READABLE FORM:
MEDIUM TYPE: Floppy
RRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unknown
                                                  CITY: Washington STATE: PG
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277

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TLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRF--DNKR 482
                                                                                                                                                                                                                                                                                                                           305 GHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCS 364
                                                                                                                                                          365 KDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVR 424
                                                                                                                                                                                                  540 GHDKPVHTVLLNDKYLFSGSSDKTIKVMDLKTLECKYTLESHARAVKTLCISGQYLFSGS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: TSUJIMOTO, MASAFUMI
APPLICANT: TSUJIMOTO, MASAFUMI
APPLICANT: INOUG. KRIZO
APPLICANT: ALT, HIROYUKI
TITLE OF INVENTION: OXIDIZED PHOPHOLIPID DEGRADING ENZYME
TITLE OF INVENTION: AND GENE THEREOF
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & ADDRESSEE: NEUSTADT, P.C. STREET: 1755 S. Jefferson Davis Highway, Suite 400 CITY: Arlington STATE: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
CLASSIFICATION NUMBER: US/08/283,917
FILING DATE: 03-AUG-1994
CLASSIFICATION SATA:
APPLICATION NUMBER: US 20943/1993
FILING DATE: 03-AUG-1993
ATTORNEY AGENT INFORMATION:
NAME: Oblon, No. 5649557man F.
REGISTRATION NUMBER: 24,618
REFERENCE FOOCKET NUMBER: 2292-030-0
TELECHONE: (703) 413-220
TELECHONE: (703) 413-220
TELECHONE: (703) 413-220
TELECHONE: (703) 413-220
TELECHONE: (703) 413-220
TELECHONE: CARACTERISTICS:
SEQUENCE CHARACTERISTICS:
TENEVALUM AND ACCURE THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION TO SATA THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATION THE APPLICATI
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3, Application US/08283917
Patent No. 5849557
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Matches 87; Conserva
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STRANDEDNESS:
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24.1%; Pred. No. 1.9e-32;
tive 84; Mismatches 172; Indels 118; Gaps
                                                                                                                                                                                                                                                                                                                                                      (EF-2 KINASE)
                                                                                                                                                                                                                                                                                                                                                                                                                                          ORRESPONDENCE ADDRESS:
ADDRESSEE: David A. Jackson, Esg.
STREET: 411 Hackensack Ave, Continental Plaza, 4th
STREET: #10or
CITY: Hackensack
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.30 RRENT APPLICATION DATA: APPLICATION NUMBER: US/08/914,999
                                                                                                                                                                                                                                                 PELICANT: Kyazanov, Alexey G.
PPLICANT: Hait, William N.
PPLICANT: Pavur, Karen S.
ITLE OF INVENTION: ELONGATION FACTOR-2 KINASE
ITLE OF INVENTION: AND METHODS OF USE THEREFOR
MRER OF SEQUENCES: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----YDYKS----
   ----YSRKFSY 668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TORNEY/AGENT INFORMATION:
NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 601-1-078
TELECHMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dictyostelium discoideum
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                                                                                                                                                   ence B, Application US/08914999
1t No. 6346406
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IBM PC compatible
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RMATION FOR SEQ 1D NO: 8:
QUENCE CHARACTERISTICS:
649 AADGSIRGWD-AND---
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es 119; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
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COUNTRY: USA
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IGINAL SOURCE:
ORGANISM: Dict
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Gaps

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280 IVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDE--RVIITGSSDSTVRVWDVNTG 337
                                                                                                                                                                                                                                     338 EMLNTLIHHCEAVLHLRF--NNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV 395
                                                                                                                                                                                                                                                                    122 MVSASEDATIKVWDYETGDFERTLKGHTDSVQDISFDHSGKLLASCSADMTIKLWDFQGF 181
                                                                                                                                                                                                                                                                                                                                    396 V--DFDDKYIVSASGDRIIKVWNTSTCEFVRTLNGHKRGIACLQYRDR------ 441
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359 KTLRVWDY------KNKRCMKTLNAHEHFVTSLDFHKTAPYVVTGSVDQTVKVWE 407
                                      ; Score 354; DB 2; Length 409;
; Pred. No. 8e-29;
57; Mismatches 110; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: ADACHI, HIDEKI
APPLICANT: TSUJIMOTO, MASAFUMI
APPLICANT: INVUE, KEIZO
APPLICANT: INVUE, KEIZO
APPLICANT: INVUE, KEIZO
APPLICANT: OF INVENTION: OXIDIZED PHOPHOLIPID DEGRADING ENZYME
TITLE OF INVENTION: AND GENE THEREOF
NUMBER OF ESQUENCES: 31
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 1755 S. Jefferson Davis Highway, Suite 400
CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: DP 209943/1993
FILING DATE: 03-AUG-1993
ATTORNEY/AGENT INPORMATION:
NAME: Oblon, No. 5849557man F.
REGISTRATION NUMBER: 24,618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Vei
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/283,917
FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 9, Application US/08283917
Patent No. 5849557
                                      Query Match
Best Local Similarity 29.2%;
Matches 87; Conservative 5
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INFORMATION FOR SEQ ID NO:
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280 IVSGLRDNTIKIWDKNILECKRILIGHTGSVLCLQYDE--RVIITGSSDSTVRVWDVNTG 337
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                                                                                                                                                                                                                                                                                                                                                                                                                                           ---KNKRCMKTLNAHEHFVTSLDFHKTAPYVVTGSVDQTVKVWE 407
                                                                                                         338 EMLNTLIHHCEAVLHLRF--NNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV
                                                                                                                                                                                                           396 V--DFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDR------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PELICANT: ADACHI, HIDEKI
PELICANT: TSUJINOTO, MASAFUMI
PELICANT: INOUG, KEIZO
PELICANT: ARAI, HIROYUKI
TILE OF INVENTION: OXIDIZED PHOPHOLIPID DEGRADING ENZYME
ITLE OF INVENTION: AND GENE THEREOF
MARK OF SEQUENCES: 31
PRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: OBLOW, SPIVAK, MCCLELLAND, MAIER & ADDRESSEE: NEUSTADT, P.C. STREET: 1755 S. Jefferson Davis Highway, Suite 400 STATE: Virginia COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0, Version #1.25
RRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/961,716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIPTCATION:
LOR APPLICATION DATA:
APPLICATION NUMBER: US 08/283,917
ALLING DATE: 03-AUG-1994
APPLICATION NUMBER: UP 209943/1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FILING DATE: 03-AUG-1993
FEGISTRATION NUMBER: 24,618
FEGISTRATION NUMBER: 2292-030-0
ILECOMMUNICATION INFORMATION:
TELEPHONE: (703) 413-220
TELEX: 248855 OPAT UR
NRMATION FOR SEQ ID NO: 3:
OURDICE CHARACTERISTICS:
LENGTH: 409 amino acids
TYPE: amino acid
FILEST: URKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ence 3, Application US/08961716
t No. 5880272
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LIGINAL SOURCE:
ORGANISM: Bos taurus
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OPERATING SYSTEM:
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                                                                                                                                              338 EMLNTLIHHCEAVLHLRF--NNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV 395
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360 KTLRVWDY------KNYRCMKTLNAHEHFVTSLDFHKTAPYVVTGSVDQTVKVWE 408
y Match 11.7%; Score 354; DB 2; Length 410; Local Similarity 29.2%; Pred. No. 8.1e-29; hes 87; Conservative 57; Mismatches 110; Indels 44; Gaps
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completed: October 22, 2003, 10:26:37 me : 32 secs

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[1]
SEQUENCE FROM N.A.
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Q8chd5 mus musculu
Q92340 mus musculu
Q44382 drosophila
Q97de3 drosophila
Q932c7 mus musculu
Q922c7 mus musculu
Q92xf4 drosophila
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O8by90 mus musculu
O8k022 mus musculu
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sapien
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                                                         October 22, 2003, 10:14:07; Search time 104 Seconds (without alignments) 1411.845 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 red. No. is the number of results predicted by chance to have a core greater than or equal to the score of the result being printed, nd is derived by analysis of the total score distribution.
                                                                                                                   ......PAAQAEPPRSPSRTYTYISR 569
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Ogeri2 h
Ogele0 h
Ogeale h
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                      umber of hits satisfying chosen parameters:
                                                                                                                                                                  830525 seqs, 258052604 residues
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Maximum Match 100%
Listing first 45 summaries
                                       using sw model
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Q9Z159
QBR1G7
QBR1G7
QBCR022
QBCRD2
Q9CRD5
Q9VDE3
Q9VDE3
Q9ZC7
Q9ZC7
                                                                                                                  1 MDPAEAVLQEKALKFMNSSE...
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1: Sparchea:*
2: Sp bacteria:*
3: Sp_fungi:*
4: Sp_human:*
5: Sp_mammal:*
5: Sp_mammal:*
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sp_unclassified:*
sp_rvirus:*
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seq length: 200000000
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sp_virus:*
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Match Length DB
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98.5
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Q969H0 Q8VHP4 Q8VBV4 Q8UUN3 Q95ZT0	044083 Q8CCS5 Q8X1P2 Q8X1P4	Q8X1P3 Q8X1P5 Q8Z0R1 Q8UUN8	Q9D4T2 Q8N136 Q8N776 Q8YL09 Q8Z020	OSENTA QBYZL9 QBYSC0 Q90ZL4 Q9PTR5 Q8HXX0	Q9GL51 Q8AVN1 Q8KB12 O96698 Q8I0F4
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ALIGNMENTS

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"Uniquitin-dependent degradation of IkappaBalpha is mediated by a ubiquitin ligase Skpl/Cul 1/F-box protein FWDL.", Proc. Natl. Acad. Sci. U.S.A. 96:3859-3863(1999).
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MEDLINE-99075339, PubMed=9859996,
Yazon A., Hatzubai A., Davis M., Lavon I., Amit S., Manning A.M.,
Andersen J.S., Mann M., Mercurio F., Ben-Neriah Y.;
"Identification of the receptor component of the IkappaBalpha-
                                                                                                                                                                                                                                                                         Bukaryotz, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=99199275; PubMed=10097128;
Hatakeyama S., Kitagawa M., Nakayama K., Shirane M., Matsumoto M.,
Hattori K., Higashi H., Nakano H., Okumura K., Onoe K., Good R.A.,
Nakayama K.-1.;
                                                  01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
Ubiquitin ligase FWD1 (Beta-transducin repeat containing protein)
Frbox-W040 repeat protein 1).
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Submitted (FEB-2001) to the EMBL/GenBank/DDBJ databases.
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PRT;
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MEDLINE=21601157; PubMed=11735228;
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Nature 396:590-594(1998).
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    KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
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01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINEs-99145465; PubMed=9990853;
Spencer E., Jiang J., Chen Z.J.;
Signal-induced ubiquitination of IkappaBalpha by
Slimb/beta-TrCP.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 98.5%; Score 2990; DB 11;
Best Local Similarity 98.4%; Pred. No. 3.8e-248;
Matches 560; Congervative 3; Mismatches 6;
                                                                                                                                   ILIWDFLNDPAHAEPPRSPSRTYTYISR 569
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BTRC.
                                                                                            ILIWDFLNDPAAQAEPPRSPSRTYTYISR
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                             Kayama K.1.; haracterization of a Mouse Gene (Fbxw6) That Encodes a Homologue enorhabditis elegans SEL-10.";
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Local Similarity 98.6%; Pred. No. 9.6e-249;
es 561; Conservative 3; Mismatches 5; Indels 0
Hatakeyama S., Nakayama K., Ishida N., Kawakami
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STATIS=C758L663; PubMed=12466851;

RA STATIS=C758L663; PubMed=12466851;

RA The FANTOM Consortium,

RA The RIKEN Genome Exploration Research Group Phase I & II Team;

RA The RIKEN Genome mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the mouse transcriptome based on functional annotation of RT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis of the MT "Analysis 
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Mus musculus (Mouse).
Mus musculus (Mouse).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
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                                                                     361 VICSKDRSIAVWDMASPIDIILRRVLVGHRAAVNVVDFDDKYIVSASGDRIKVWNISTC
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Local Similarity 97.9%; Pred. No. 4.1e-247;
es 557; Conservative 4; Mismatches 8; Indels 0
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nston J., Elledge S.J., Harper J.W.;

bmitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.

BL, AFI10396, AAD41025.1; -.

D, MGI:1338871; Btrc.

terPro; IPRO1010; F-box.

terPro; IPRO1010; F-box.

terPro; IPRO1010; WD40.

am; PF00460; WD40.

am; PF00460; WD40; 7.

INTS; PR00320; GPROTEINBRPT.

ART; SM00256; FBOX; 1.

ART; SM00256; FBOX; 1.

ART; SM00320; WD KEPEATS.1; 6.

OSITE; PSS0181; FBOX; 1.

OSITE; PSS0082; WD REPEATS.2; 7.

OSITE; PSS0082; WD REPEATS.2; 7.

OSITE; PSS0294; WD REPEATS_REGION; 1.

Peat; WD repeat.

QUENCE 569 AA; 65209 MW; E6DDCAD28D551D9D CRC64;
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-MAY-2000 (TrEMBLrel. 13, Last sequence update)
-OCT-2002 (TrEMBLrel. 22, Last annotation update)
teatransducin repeat-containing protein.
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                                                                                                                                                      408
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDERVIITGSSDST 328
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                                                                                                                                                                                                                                                                    462
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               149 PARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKKLIERMVRTDSLWRGLAE
                                                                                                       IKIWDKSSLECLKVLTGHTGSVLCLQYDERVIVTGSSDSTVRVWDVNTGEVLNTLIHHNE
                                                                                                                                                                            343 AVLHIRFSNGLMVTCSKDRSIAVWDWASATDITLRRVLVGHRAAVNVVDFDDKYIVSASG
                                                                                                                                                                                                                                                                                                                             TISSUE=Brain;
Okazaki N., Kikuno R., Ohara R., Inamoto S., Hara Y., Nagase T.,
Ohara O., Koga H.;
Prediction of the coding sequences of mouse homologues of KIAA gene:
I. The complete nucleotide sequences of 100 mouse KIAA-homologous cDNA identified by screening of terminal sequences of cDNA clones randomly sampled from size-fractionated libraries.";
Submitted (OCT-2002) to the EMBL/GenBank/DDBU databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29 PPRKIIPEKNSLROTYNSCARLCLNOETVCLASTAMKTENCVAKTKLANGTSSMIVPKOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29 PPGPIAAE----RRERGGAAGAAMBPDSV------IEDKTIELMISNGTSSVIVSRKR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89 KLSASYEKEKELCVKYPEQWSESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITAL
                         349 AVLHLRFNNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASG
                                                                                                                                                                                                                              DRIIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEG
                                                                                                                                                                                                                                                                  DRIIKVWSTSTCEFVRILNGHKRGIACLQYRDRLVVSGSSDNIIRLWDIBCGACLRVLEG
                                                                                                                                                                                                                                                                                                       HEBLVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFD
     NSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNT
                                                                               IKIWDKNTLECKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Wouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
VCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE 555 AA; 63287 MW; 6025496DBAC6A489 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-WAR-2003 (TrEMBLrel. 23, Created)
U-WAR-2003 (TrEMBLrel. 23, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
WKIAA0696 protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                               EFQIVSSSHDDTILIWDFLNDPAAQAEPPRSPSRTYTYISR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match
77.8%; Score 2360; DB 11
Best Local Similarity 81.9%; Pred. No. 5e-194;
Matches 443; Conservative 38; Mismatches 46
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                                                                                                                                       480
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45 VRCLQNTSVMEDQNEDESPKKSALWQISNGTSSVIVSRKRPSEGNYQKEKDLCIKYFDQW 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SESDOVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKS 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             105 SESDQVEFVEHLISRMCHYQHGHINSYLKPMLQRDFITALPEQGLDHIAENILSYLDARS 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                169 LGAABLVCKEWYRVTSDGMLWKKLIBRNVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPP 228
                         320
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                                                                                                                                                              KRIVSGAYDGKIKVWDLQAALDPRAPASTLCLRTLVEHSGRVFRLQFDBFQIISSSHDDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN
                                                                                                                                                                                                            KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT
                                                             VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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mmalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
bi_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rausberg R.;

rausberg R.;

buited (JUL_2002) to the EMBL/GenBank/DDBJ databases.

BL; BCO31261, AAH34261.1;

terPro; 1PR001810; F-box.

terPro; 1PR001810; F-box.

terPro; 1PR001680; WD40.

am; PF004064; F-box; 1.

am; PF00400; WD40; 7.

INTS; PR00320; GPROTEINBRPT.

OBDM; PD000018; WD40; 4.

(ART; SM00320; WD40; 7.

OSTITE; PS50082; WD_REPEATS 1; 5.

OSTITE; PS50082; WD_REPEATS 2; 7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peat; WD repeat.
QUENCE 563 AA; 64481 MW; 74D07E6BB850ABED CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                      K022;
-OCT-2002 (TrEMBLrel. 22, Created)
-OCT-2002 (TrEMBLrel. 22, Last sequence update)
-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                        563 AA
                                                                                                                                                                                                                                                                                       ILIWDFLNDPAAQAEPPRSPSRTYTYISR 569
                                                                                                                                                                                                                                                                                                           box and WD-40 domain protein 1B. s musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                es 454; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SSUE=Kidney;
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IKIMDKNTLECKRILIGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCE 348
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                                                                                                                                                               LCAAELVCKEWQRVISEGMLWKKLIERMVRTDPLWKGLSERRGWDQYLFKNRPTDG--PP
                                                                                                                                                                                                                                                      NSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNT
                                                                                                                                                                                                                                                                                             283 IKIMDKSSLECLKVLTGHTGSVLCLQYDERVIVTGSSDSTVRVWDVNTGBVLNTLIHHNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        349 AVLHLRFNNGMMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASG
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                                                        SESDQVEFVEHLISRMCHYQHGHINSYLKPMLQRDFITALPEQGLDHIAENILSYLDARS
                                                                                                                              LCAAELVCKEWYRVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPP
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Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta, Pterygota, Neoptera, Endopterygota, Diptera, Erachycera, Muscomorpha, Ephydroidea, Drosophilidae, Drosophila.

NCBI_TaxID=7227,
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PROSITE; PS50082; WD_REPEATS_2; 7.
PROSITE; PS50294; WD_REPEATS_REGION; 1.
SEQUENCE 510 AA; 58952 NW; DBB0243D3730A5E8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EFQIVSSSHDDTILIWDFLNDPAAQAEPPRSPSRTYTYISR 569
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EFQIISSSHDDTILIWDFLNVPPSAQNETRSPFRTYTYISR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        510 AA
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01-JUN-1998 (TrEMBLrel. 06,
01-JUN-1998 (TrEMBLrel. 06,
01-OCT-2002 (TrEMBLrel. 22,
SLIMB.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56 TVCLASTA-MKTEN-----CVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQW
255 GVYCLQYDDDKIISGLRDNSIKIWDKSSLECLKVLTGHTGSVLCLQYDERVIVTGSSDST
                                                                                                                                           VRVWDVNTGEVLNTLIHHNEAVLHLRFSNGLMVTCSKDRSIAVWDMASATDITLRRVLVG
                                                                                                                                                                                                                                                                   HRAAVNVVDFDDKYIVSASGDRTIKVWSTSTCEFVRTLNGHKRGIACLQYRDRLVVSGSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TLCLRILVEHSGRVFRLQFDEFQIISSSHDDTILIWDFLNVPPSAQNETRSPSRTYTYIS
                                                                                                   VRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASPTDITLRRVLVG
                                                                                                                                                                                                                              HRAAVMVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVVSGSS
                                                                                                                                                                                                                                                                                                                                                         DNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAG
                                                                                                                                                                                                                                                                                                                                                                                                                  DNTIRLWDIECGACLEVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLQAALDPRAPAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TECLRILVEHSGRVFRLQFDEFQIVSSSHDDTILIMDFLNDPAAQAEPPRSPSRTYTYIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Action 10. A Herter J.R., Slaga T.J., Fuchs S.Y., Spiegelman V.S.; ouse homolog of HOS (mHOS) is overexpressed in skin tumors and plicated in constitutive activation of NP-kappaB."; bmitted (JUM-2001) to the EMBL/GenBank/DDBJ databases.

BL; AY038079; AAK72095.1; -. BL; AY038079; AAK72095.1; -. BL; AY038079; AAK72095.1; -. Arman PRO040810; F-box. LerPro; IPR001810; F-box. LerPro; IPR001810; F-box. 1. Arman PRO04064; P-box. 1. Arman PRO0409; WHO40; 7. INTS; PR00320; GPROTEINBRPT. Arman PRO0409; WHO40; 7. INTS; PR00320; WHO40; 7. INTS; PR00320; WHO40; 7. INTS; PR00320; WHO40; 7. INTS; PR00818; WHO40; 7. INTS; PR00818; WHO40; 7. INTS; PR00818; WHO40; 7. INTS; PR00818; WHO40; 7. INTS; PR00818; WHO40; WHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO40; MHO
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Karyota, Metažoa; Chordata; Craniata; Vertebrata; Buteleostomi;
mmalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
bI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       563 AA; 64741 MW; 9AB562F3FF5E3496 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -DEC-2001 (TrEMBLrel. 19, Created)
-DEC-2001 (TrEMBLrel. 19, Last sequence update)
-MAR-2003 (TrEMBLrel. 23, Last annotation update)
box/Wp40 repeat-containing protein HOS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           563 AA
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es 440; Conservative
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QUENCE 563 AA
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PAINEBERKELEY,

ams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,

amatides P.G., Scherer S.E., Holt R.A., Hoskins R.A., Galle R.F.,

orge R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,

tron G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,

andon R.C., Baxter B.G., Helt G., Nelson C.R., Miklos G.L.G.,

n.K.H., Doyle C., Baxter B.G., Helt G., Nelson C.R., Miklos G.L.G.,

ril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,

llew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,

eson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,

rkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,

rits K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,

erry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,

Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,

dson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,

thin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,

sler C., Gabriellian A.E., Gargn N.S., Gelbart W.M., Glasser K.,

odek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
                                                                                                                                                                                                                                                                                                                                                                                      418
                                                                                                                                                                179 WYRVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPK 238
                                                                                                                                                                                                                                       IIQDIETIESNWRCGRHSLORIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLE 298
                                                                                                                                                                                                                                                          CVKTLMGHTGSVLCLQYDDKVIISGSSDSTVRVWDVNTGEMVNTLIHHCEAVLHLRFNNG 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRF 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHD 538
                 MKTENCVAKTKLANG---TSSMIVPKQRKLSAS--YEKEKELCVKYFEQWSESDQVEFVE 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DIKRIVSGAYDGKIKVWDLVAALDPRAASNILCLNILVEHIGRVFRLQFDEFQIVSSSHD 481
                                                  62
                                                                                                                           HILISRMCHYQHGQINAYLKPMLQRDFITLLPIKGLDHIGENILSYLDAESLKSSELVCKE
                                                                                                                                                                                        TCEFVRILNGHKRGIACLQYRDRLVVSGSSDNSIRLWDIECGACLRVLEGHEELVRCIRF
                                                  METDKIMDETN-SNAQAFTTTMLYDPVRKKDSSPTYQTERELCFQYFTQWSESGQVDFVE
                                                                                        HLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKE
                                                                                                                                                                                                                                                                                                               CKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNG
                                                                                                                                                                                                                                                                                                                                                                                      MMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           osophila melanogaster (Fruit fly).
karyota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
karyota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
hydroidea; Drosophilidae; Drosophila.
El_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VDE3;
-MAY-2000 (TrEMBLrel. 13, Created)
-MAY-2000 (TrEMBLrel. 13, Last sequence update)
-MAY-2003 (TrEMBLrel. 23, Last annotation update)
MB protein (SLIMB) (LD086699).
MB OR CG3412.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               510 AA
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RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
Aslali M., Kalush F., Karpen G.H., Kez', Kennison J.A., Ketchum K.A.,
Aslali M., Kalush F., Karpen G.H., Kez', Kennison J.A., Ketchum K.A.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Lasko P., Lei Y., McIntosh T.C., McLeod M.P., McPherson D.,
RA Merkulov G., Milshina N.V., Mobarry C., Murzhy J.M., Nelson D.L.,
RA Mount S.M., Noy M., Murphy B., Murphy L., Murzhy D.M., Nelson D.L.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Reinert K., Remington K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier K., Spradling A.C., Stapleton M., Strong R., Sun B.,
RA Spier S., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.
RA Williams S.M., Woodage T.W., Zhong W., Zhong S., Zho Q., Zhao Q., Zhao G., Zhao G., Zhao G., Zhao G., Zhao G., Zhao G., Zhao G., Zhao G., Schence 287:2185-2195(2000).
RA Schence 287:2185-2195(2000).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119 HLISOMCHYOHGHINSYLKPMLORDFITALPARGLDHIAENILSYLDAKSLCAAELVCKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123 WLRVISEGMLWKKLIERKVRTDSLWRGLAERRNWMQYLFKPRPGQ-TQRPHSFHRELFPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
TISSUE-Ovary, and Imaginal disks;
MIDDINE-2025299; PubMed=10781936;
Miletich I., Limbourg-Bouchon B.;
"Drosophila null slimb clones transiently deregulate Hedgehog-independent transcription of wingless in all limb discs, and induce decementablegic transcription linked to imaginal disc regeneration.";
Mech. Dev. 93:15-26(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Berkeley;
Staplicon M., Brokstein P., Hong L., Agbayani A., Carlson J.,
Staplicton M., Brokstein P., Hong L., Agbayani A., Carlson J.,
George M., Chavez C., Dorsett V., Dresnek D., Farfan D., Frise E.,
George R., Gonzalez M., Guarin H., Kronmiller B., Li P., Liao G.,
Miranda A., Mungall C.J., Nunco J., Pacleb J., Paragas V., Park S.,
Patel S., Phouanenavong S., Wan K., Yu C., Lewis S.E., Rubin G.M.,
Celniker S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         68.9%; Score 2089.5; DB 5; Length 510; 78.3%; Pred. No. 7.7e-171; 2ive 49; Mismatches 53; Indels 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, AEC03733; AAF55813; -.
EMBL, AF222924; AAF63214.1; -.
EMBL, AF222233; AAF63213.1; -.
EMBL, AY118898; AAM50758.1; -.
EMBL, AXII8899; AAM50758.1; -.
ENBLS, EMBL, AXII8899; AAM50758.1; -.
InterPro; IFR001810; F-box.
InterPro; IPR001810; F-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Repeat; WD repeat. _____S8952 MW; F4D5DF126F58A012 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative 49; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam, PP00646; F-box; 1.
Pfam, PP00101, WD40; 7.
PRINTS; PR00320; GPROTEINBRPT.
PRODOM; PD000018; WD40; 4.
PROSITE; PS50181; FBOX; 1.
PROSITE; PS00078; WD_REPEATS_1; 5.
PROSITE; PS50082; WD_REPEATS_2; 7.
PROSITE; PS50294; WD_REPEATS_REGION; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             394;
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318 RVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKDRSIAVWDMASP 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TDITLERVLVGHRAAVNVVDFDDXXIVSASGDETIKVWSTSTCEFVETLNGHKEGIACLQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 438 YRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDL 497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 QAALDPRAPASTLCLRTLVEHSGRVFRLQFDEFQIISSSHDDTILIWDFLNVPPSAQNET 240
                                                                                                                                                          RFDSKRIVSGAYDGKIMIWDLAAALDPMTPPNSICIKTLSQHTGRVFRLQFDEFQIISSS 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RVIVTGSSDSTVRVWDVNTGEVLNTLIHHNEAVLHLRFSNGLMVTCSKDRSIAVWDMASA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 YRDRLVVSGSSDNTIRLWDIECGACLRVLØGHEBLVRCIRFDNKRIVSGAYDGKIKVWDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         498 VAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAQAEPP
TDITLERVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQ
                                                                                          241 ASTCEFVRTLNGHKRGIACLQYRDRLIVSGSSDYSIRLWDIECGNCLRVLEGHEELVRCI
                                                                                                                              RFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40.5%; Score 1230; DB 11; Length 252; 92.9%; Pred. No. 1.9e-97; Live 7; Mismatches 11; Indels 0
                                                                                                                                                                                                                      ---- QAEPPRSPS 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.;
Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC008552; AAH08552.1; -.
MGD; MG1.21444023; Fbxwlb.
InterPro; IPR001680; WD40.
Pfam; PP00400; WD40; 6.
                                                                                                                                                                                                                                                                                                                                           Q922C7;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Sinilar to f-box and WD-40 domain protein 1B (Fragment)
FBXW1B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                252 AA; 28424 MW; F71737CBD7A9F75F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS, PRO0320; GPROTEINBRPT.
ProDom; PD000018; WD40; 3.
SWART; SW00320; WD40; 3.
PROSITE; PS00678; WD REPEATS_1; 5.
PROSITE; PS50082; WD REPEATS_2; 6.
PROSITE; PS50294; WD REPEATS_2; 6.
                                                                                                                                                                                                   HDDTILIMDFLN-DPAA-----
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                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Repeat; WD repeat.
NON TER 1
SEQUENCE 252 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 234; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                      181
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                                                                                                                                                                                                                                                                                          RESULT 11
0922C7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193 IBRMVRTDSLWRGLAERRGWGQYLFKNK-------PPDGGNAP---PNSFYRALY 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          237 PKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNT 296
                    239 IIQDIBTIESNWRCGRHSLORIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLE 298
                                                                                                                              301
                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                   DTKRIVSGAYDGKIKVWDLVAALDPRAASNTLCLNTLVEHTGRVFRLQFDEFQIVSSSHD 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                           CVKTLMGHTGSVLCLQYDDKVIISGSSDSTVRVWDVNTGEMVNTLIHHCEAVLHLRFNNG
                                                                                                                                                                                  MMVICSKDRSIAVWDMTSPSEITLRRVLVGHRAAVNVVDFDEKYIVSASGDRIIKVWSTS
                                                                                                                                                                                                                                                          SCEFVRILNGHKRGIACLQYRDRLVVSGSSDNSIRLWDIECGACLRVLEGHEELVRCIRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 IERQVRNDALWAGLAIRRGWKKYFFCSKDQATRAISQSWRQPKNGEDALEFQHKFYRELY
                                                                                          CKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNG
                                                                                                                                                                 MMVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTS
                                                                                                                                                                                                                                       TCEFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRF
                                                                                                                                                                                                                                                                                                           DNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -Jun-2001 (TrEMBLrel. 17, Created)
-JUN-2001 (TrEMBLrel. 17, Last sequence update)
-JOT-2002 (TrEMBLrel. 22, Last annotation update)
ta-transducin repeat-containing protein (Fragment).
terodera glycines (Soybean cyst nematode).
karyota; Metazoa; Nematoda; Chromadorea; Tylenchida; Tylenchina; lenchoidea; Heteroderidae; Heteroderinae; Heterodera.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49.4%; Score 1498; DB 5; Length 430; 69.9%; Pred. No. 4e-120; ative 36; Mismatches 50; Indels 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 539 DTILIWDFLNDPAAQAEPPRSPS 561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 69.99
es 283; Conservative
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                                                                                                                              242
                                                                                                                                                                 359
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1121 VQYDGKLIVSGAYDYMVKIWHPERQECLHTLOGHTNRVYSLQFDGLHVVSGSLDTSIRVW 1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   852 FQRWSHVERLLALDRLIDHCDPSQVRHMMKVIEPQFQRDFISLLPR----ELALFVLSYL 907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             223 -DGNAPP-NSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKG-----VYCLQY 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          276 DDQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVN 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             336 TGEMLNTLIHHCEAVLHLRFNNGMNVTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNV 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          165 DAKSLCAAELVCKEWYRVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              456 DIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              396 VDFDDKYIVSASGDRTIKVWNTSTCBFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLW
                                                                                                                                                                                                                                                                                                                                                                                                        105 FEQWSESDQVEFVEHLISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYL
                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
IISSUE=Placenta;
Isogai T., Ota T., Hayashi K., Sugiyama T., Otsuki T., Suzuki Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                         52;
                                                                                                                                                                                                                                                                                                                                     Length 1326;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Butelé
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                                                    21.8%; Score 661; DB 5; Length 13 34.9%; Pred. No. 1.7e-47; ive 76; Mismatches 167; Indels
                                                                                                                                                                                                                                                                                                      1326 AA; 141360 MW; 3F42C873CFA3027F CRC64;
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases. EMBL; AE003480; AE022481. -
EMBL; AYO61300; AAL28848.1; -
EMBL; AYO51300; AAL588131.1; -
EMBL; AYO75401; AAL68231.1; -
ENJBASE; FBGN0641171; ago.
InterPro; IPRO1810; F-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Hypothetical protein FLJ11071.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1232 SGPNKHHSAVTCLOFNSRFVVTSSDDGTVKLWD 1264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               516 V---EHSGRVFRLOFDEFQIVSSSHDDTILIWD
                                                                                                                                                                                                                 PROSITE; PS50181; FBOX; 1.
PROSITE; PS00678; WD_REPEATS_1; 5.
PROSITE; PS50082; WD_REPEATS_2; 7.
PROSITE; PS50294; WD_REPEATS_REGION; 1.
Repeat; WD_repeat.
SEQUENCE 1326 AA; 141360 MW; 3F42C8
                                                                                                                                                   PRINTS; PR00320; GPROTEINBRPT.
ProDom; PD000018; WD40; 2.
SMART; SM00256; FEOX; 1.
SMART; SM00320; WD40; 7.
                                                                                                                  Pfam; PF00646; F-box; 1.
Pfam; PF00400; WD40; 7.
                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                       158;
                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local A
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427 NGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDNKRIVSG 486
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67 RAANGQG-----QQRRRITSVQPPTGLQEWLKMPQSWSGPEKLLALDELIDSCEPTQVKH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 132 INSYLKPMLORDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWYRVTSDGMLWKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    192 LIERMVRTDSLWRGLAE-----RRGWGQYLFKNKPPDGNAPPNSFYRALYPKIIQDIETI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247 ESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         307 TGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMMVTCSKD
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                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 561
                     Eukaryota, Metazoa; Chordata, Craniata, Vertebrata, Butele
Mammalia, Eutheria, Primates, Cararrhini, Hominidae, Homo.
NCBI_TaxID=9606;
                                                                                                                                    S.J., Harper J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                 Koepp D.M., Winston J.T., Harper J.W., Elledge S.J.; Submitted (MAY-2011) to the EMBL/GenBank/DDBJ databases. EMBL; AF381178, AAK60269.1; -. InterPro; IPR001810; F-box. InterPro; IPR001680; WD40. Pfam; PF00666; F-box. I.
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                                                                                            SEQUENCE FROM N.A.
MEDILINE=20003061; PubMed=10531037;
Minston J.T., Koepp D.M., Zhu C., Elledge;
"A family of mammalian F-box proteins.";
curr. Biol. 9:1180-1182(1999).
                                                                                                                                                                                                                                                                                                                                  PRINTS; PROGAZO, GPROTEINBRPT.
PRODOM; PROGOSO, WAGO, 2.
SWART; SMOG256; FBOX; 1.
SWART; SMOG256; FBOX; 1.
SRART; SMOG250; WD40; 8.
PROSITE; PSSOG181; FBOX; 1.
PROSITE; PSSOG181; WD.REPEATS_1; 5.
PROSITE; PSSOG294; WD.REPEATS_2; 7.
PROSITE; PSSO294; WD.REPEATS_REGION; 1.
Repeat; WD repeat.
NON TER.
SEQUENCE 561 AA; 63165 MW; BSICCIEZ200
               Homo sapiens (Human)
                                                                                                                                                                                                    SEQUENCE FROM N.A.
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ESNWRCGRHSLORIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECKRILTGH
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-DEC-2001 (TrEMBLrel. 19, Last sequence update)
-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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1 J., Pauley A.M., Myers R.L., Shuang R., Brashler J.R., Yan R.,

1 J., Pauley A.M., M.E.;

JELA.B. Gurney M.E.;

SEL-10 Interacts with Presentlin 1, Facilitates Its Ubiquitination,

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TODOMS, PROBOSOS, MADOS, 2.

"ART; SMO0256; PBOX; 1.

"ART; SMO0325, WDOSS, 1.

"SOSTIE; PSSO0678; WD. REPEATS 1; 5.

YOSTIE; PSSO068; WD. REPEATS 1; 5.

YOSTIE; PSSO294; WD. REPEATS 2; 7.

YOSTIE; PSSO294; WD. REPEATS 2; 7.

YOSTIE; PSSO294; WD. REPEATS 2; 7.

YOURNCE 589 AA; 66120 MW; 2APBGE8BA36E6BDE CRC64;
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1-DEC-2001 (TrEMBLrel, 19,
1-MAR-2003 (TrEMBLrel, 23,
-box protein SEL10.
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503 WD 504
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2 1/0878TO spool_p/USOS1210168/runat_22102003 100546 17778/app_query.fasta_1.711
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GN=200 -THR SCORE=pct -THR MAX=100 -THR MIN=0 -ALIGN=15 -MODE=LOCAL
=pto -NORM=ext -HEAPSIZE=500 -MINIEN=0 -MAXLEN-20000000000
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WEOUT=120 -WARN TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
I=7 -YGAPOP=10 -YGAPEXT=0.5 -DELEXT=7
                                                                                         October 22, 2003, 13:59:32 ; Search time 4994 Seconds (without alignments) 4661.109 Million cell updates/sec
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(c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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SUMMARIES

Result No.	Score	uer	Length	DB	ID	Description
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16	4.		65	σ	7602	122 Homo
17	384.		27	0	3328	181 Homo
18	384.		23	σ	1459	96 Homo
19	38	78.4	03	10	342	3
20	36		13	σ	3327	179 Homo
21	36		87	10	9326	260 Mus mus
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ValSerGlyLeuArgAspAsnThrlleLysIleTrpAspLysAsnThrLeuGluCysLys 300
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                                                                                                                                                                                                                         LeuSerTyrLeuAspAlaLysSerLeuCysAlaAlaGluLeuValCysLysGluTrpTyr 180
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                       370 TGTGTCAAATACTTTGAGCAGTGGTCAGAGTCAGATCAAGTGGAATTTGTGGAACATCTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1090 AACACGTTGATTCACCATTGTGAAGCAGTTCTGCACTTGCGTTTCAATAATGGCATGATG
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   07-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGVYČLQYD
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Patent: WO 9938969-A_T_B_AUG-1999;

Patent: WO 9938969-A_T_B_AUG-1999;

ARENZANA SEISDEDOS FERNÂNDO (FR); CONCORDET JEAN PAUL (FR); INST
NAT SANTE RECH MED (FR); KROLL MATHIAS (FR); DURAND HERVE (FR);

BENAROUS RICHARD (FR); MARGOTTIN FLORENCE (FR); PASTEUR INSTITUT (FR)
                                                                                                                                                                  Durand, H., Benarous, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGACAGACATACAACAGCTGTGCCCAGACTCTGCTTAAACCAAGAAACAGTATGTTTAGCA
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Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                  Arenzana, S.F., Concordet, J.P., Kroll, M., Margottin, F.
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AX019507 2151 bp
Sequence 1 from Patent W09938969,
AX019507
AX019507.1 GI:10043427
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                                                                                                                                                                       MetAspProAlaGluAlaValLeuGlnGluIysAlaLeuLysPheMetAsnSerSerGlu
                                                                                                                                                                                                                                              21 ArgGluAspCysAsnAsnGlyGluProProArgLysIleIleProGluLysAsnSerLeu
                                                                                                                                                                                                                                                                            41 ArgGlnThrTyrAsnSerCysAlaArgLeuCysLeuAsnGlnGluThrValCysLeuAla
                                                                                                                                                                                                                                                                                                                                               SerThralaMetLysThrGluAsnCysValAlaLysThrLysLeuAlaAsnGlyThrSer
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                       Matches:
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I Chases 1 to 2151)

Benarous, R., Margottin, F., Durand, H., Seisdedos, F.A., Kroll, M. and Concordet, J.P.

CONCORDER TECP protein

INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE, INSTITUT PASTEUR

OS Artificial Sequence

PP 22-JAN-1999 JP 2000529429

PF 29-JAN-1999 JP 2000529429

PF 30-JAN-1999 FR 98/1100, 09-DEC-1998 FR 98/15545 PI

RICHARD BENAROUS, FLORENCE MARGOTTIN, HERVE DURAND, PI

RICHARD BENAROUS, MATHIAS, RROLL, JEAN PAUL CONCORDET PC

CINIS/00, AOIK67/027, AGIKS38/00, AGIP29/00, AGIP31/12, PC

AGIPSS/00,

CONTAL4/47, CIZNI/15, CIZNI/19, CIZNI/21, CIZNS/10, CIZQI/68//CIZPZI/ PC
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                                                                        AlaCysLeuArgValLeuGluGlyHisGluGluLeuValArgCysIleArgPheAspAsn
                                                                                                GCATGTTTACGAGTGTTAGAAGGCCATGAGGAATTGGTGCGTTGTATTCGATTGATAAC
                                                                                                                                                                         AAGAGGATAGTCAGTGGGGGCCTATGATGAAAATTAAAGTGTGGGGATCTTGTGGCTGCT
                                                                                                                                                                                                                                                                                                     ArgValPheArgLeuGlnPheAspGluPheGlnIleValSerSerHisAspAspThr
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                                                                                                                                                 LysArgileValSerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAla
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Description of the artificial sequence
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NKPDGNAPNTSFYRALYFRIIQDIETIESNWRCGRHSLQRIHCRSFTSKGYCLOYD
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                                                                                                                                                                                                                                                                                                                               /gene="PBWIA"
/function="regulates the stability of IkappaB alpha- and
beta-catenin"
                                                                                                                                                                                                                                                                                                                                                                                                       /note="contains one F-box domain and seven WD40 domains; forms an SCF with Skpl and Cull"
                                 550 First
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Direct Submission
Submitted (19-FEB-1999) Pathology, NYU Medical Center,
Ave. MSB 548, New York, NY 10016, USA
Location/Qualifiers
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Conservative:
Mismatches:
Indels:
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                                                                                                                         /organism="Homo sapiens"
| do _type="mRNA"
| db _xref="taxon:9606"
| chromosome="10"
| map="10q24"
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10 F-box protein FbwlA (FBW1A) mRNA,
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321 IleThrGlySerSerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeu 340
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Memmalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 2151)
Cenciarelli,C., Chiaur,D.S., Guardavaccaro,D., Parks,W., Vidal,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIGGACCCCCGTGCTCCTGCAGGGACACTCTGTCTACGGACCCTTGTGGAGCATTCCGGA
                                                                                                                                                                                                   ValThrCysSerLysAspArgSerlleAlaValTrpAspMetAlaSerProThrAspIle
                                                                                                                                                                                                                                                                                                ThrLeuArgArgValLeuValGlyHisArgAlaAlaValAsnValValAspPheAspAsp
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                                                                                                 AsnThrLeuIleHisHisCysGluAlaValLeuHisLeuArgPheAsnAsnGlyMetMet
                                                                                                                                                  AACACGITGATTCACCATTGTGAAGCAGTTCTGCACTTGCGTTTCAATAATGGCATGATG
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Identification of a family of human F-box proteins

Curr. Biol. 9 (20), 1177-1179 (1999)

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NKPPDGNAPPNSFYRALYPKIIQDIETIESNWRCGRHSLQRIHCRSETSKGYYČLQYD
DQKIVSGLRDNTIKIWDKNTLECKRILTGHTGSVLCLQYDBRVIITGSSDSTYRVWDV
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TLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAQAEPPRSFSRTYYY
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LSYLDAKSLCAAELVCKEWYRYTSDGMLWKKLIERMYRTDSLWRGLAERRGWGQYLFK
                                            1570 TricaAccecericericericeAccecerererereresacecerreresacecerreses
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24 rue de Fg.St-Jacques, 75014
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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Y14153
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A novel human WD procein, h-beta Trcp, that interacts with HIV-1 Vpu connects CD4 to the ER degradation pathway through an F-box motif
  LeuAspProArgAlaProAlaGlyThrLeuCysLeuArgThrLeuValGluHisSerGly
                                                                                            ArgValPheArgLeuGlnPheAspGluPheGlnIleValSerSerHisAspAspThr
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product="beats transducin repeats containing protein"
protein id="CAA74572.1"
db_xref="dI:2995194"
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Homo sapiens (human)
Homo sapiens
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| /organism="Homo sapiens"
| mol_type="mRNA"
| db_xref="taxon:9606"
| /cell_line="Jurkat T-cell"
| /cell_type="T_lymphocyte"
| tissue_type="T_lymphoid"
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Submitted (03-JUL-1997) R. Benarous,
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/gene="beta-TRCP"
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2 (bases 1 to 2151)
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                   ValSerGlyLeuArgAspAsnThrlleLysIleTrpAspLysAsnThrLeuGluCysLys
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Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1818)
Yaron, A., Hatzubai, A., Davis, M., Lavon, I., Amit, S., Manning, A.M., Andersen, J.S., Mann, M., Mercurio, F. and Ben-Neriah, Y.
Identification of the receptor component of the likappaBalpha-ubiquitin ligase
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AF101784 GI:4165135
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/dranslation="MDPAEAVLQEKALKFMCSMPRSIMLGCSSLADSMPSIRCLYNPG
TGALITAPQNSSEREDCNNGEPPRKIIPERXDESTGARLTANGTPUCLASTAMKT
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CHYQHGHINSYLKPMLQRDFITALPARGLDHIABVILLSYLDBAKSLCAAELVCKEWTRU
GDIETIESNNRCGRHSLQRIHCRSETSKGVYCLQYDDQRIVSGLRDNTILHHCREAVLHLRFN
ODIETIESNNRCGRHSLQRIHCRSETSKGVYCLQYDDQRIVSGLRDNTILHHCRAVLHLRFN
NGMWYTCSKDRSIAWDMASPTDITLRRVLVGHRAANNVUDPDDKYIVSAGDRTIKV
WNTSTCERVTLINGHKRGIACLQYRDRLVSGSSDNTTRLWITLNVEHSGRVFRLGFBEE
VRCIRFDNKLIVGGAYDGRKIKWMDLVAALDPERAPATICLRTLVEHSGRVFRLQFDEF
QIVSSSHDDTILIMDPLANDPAAQAEPPRSPRTYTYISR"
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receptor component of IkappaBa-ubiquitin ligase; contains
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361 CCCAAGCAACGGAAACTCTCAGCAAGCTATGAAAAGGAAAAGGAACTGTGTGTCAAATAC
                                                                                              University-Hadassah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MetAspProAlaGluAlaValLeuGlnGluLysAlaLeuLysPheMet
                                                       Mannig, A.M.,
                                                                                               Hebrew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
                                        2 (bases 1 to 1818)
Yaron, A., Hatzubai, A., Mercurio, F., Mayann, M. and Ben-Neriah, Y.
Direct Submission
Submitted (27-00T-1998) Immunology, He
Medical School, Jerusalem, Israel
Location/Qualifiers
                                                                                                                                    1. .1818
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  (1998)
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  (6711), 590-594
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGAGACAACACAATCAAGATCTGGGATAAAAACACATTGGAATGCAAGCGAATTCTCACA
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                          421 TITGAGCAGIGGICAGAGICAGATCAAGIGGAATITGIGGAACAICTIATATCCCAAAIG
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                                                                                                                                                                                                                                                                                                                                                                                                                             GATGGCATGCTGGAAGAAGCTTATCGAGAGATGGTCAGGACAGATTCTCTGTGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGCTCCCCAACTCTTTTATAGAGCACTTTATCCTAAAATTATACAAGACATTGAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeuAsnThrLeuIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1081 TCGGATTCCACGGTCAGAGTGTGGGATGTAAAAAAATACAGGTGAAATGCTAAAACACGTTGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1141 CACCATTGTGAAGCAGTTCTGCACTTGCGTTTCAATAATGGCATGATGACGACCTGCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LysAspArgSerIleAlaValTrpAspMetAlaSerProThrAspIleThrLeuArgArg
                                                                                            CysHisTyrGlnHisGlyHisIleAsnSerTyrLeuLysProMetLeuGlnArgAspPhe
                                                                                                                                                                                                IleThrAlaLeuProAlaArgGlyLeuAspHisIleAlaGluAsnIleLeuSerTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AsnAlaProProAsnSerPheTyrArgAlaLeuTyrProLysIleIleGlnAspIleGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841 ACAATAGAATCTAATTGGAGATGTGGAAGACATAGTTTACAGAGAATTCACTGCCGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901 GAAACAAGCAAAGGAGTTTACTGTTTACAGTATGATCAGAAAATAGTAAGGGGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GlyHisThrGlySerValLeuCysLeuGlnTyrAspGluArgValIleIleThrGlySer
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PheGluGlnTrpSerGluSerAspGlnValGluPheValGluHisLeuIleSerGlnMet
                                                                                                                                                                                                                                                                                                                                              GATGCCAAATCACTATGTGCTGCTGAACTTGTGTGCAAGGAATGGTACCGAGTGACCTCT
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Matches:
Conservative:
Mismatches:
Indels:
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Howo Sapiens, beta-transducin repeat containing, clone MGC:40028
BC027994
BC027994.1 GI:20380815
                             1501 GTGTTAGAAGGCCATGAGGAATTGGTGCGTTGTATTCGATTTGATAACAAGAGGATAGTC 1560
                                                                                                                                         AGTGGGGCCTATGATGGAAAAATTAAAGTGTGGGGATCTTGTGGCCTTTGGACCCCCGT 1620
                                                                                                                                                                                                                                                   GCTCCTGCAGGGACACTCTGTCTACGGACCCTTGTGGAGCATTCCGGAAGAGTTTTTCGA 1680
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Akhter.N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Brench,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gubta,J., Haghigh,P., Raduro,Q.L.,
Hansen,N., Ho,S.-L., Karlins,E., Laric,P., Legaspi,R., Maduro,Q.L.,
Masiello,C., Maskeri,B., Mastrian,S.D., McCloskey,J.C., McDowell,J.,
Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W., Tsurgeon,C.,
Vogt,J.L., Walker,M.M., Wetherby,K.D., Wiggins,L., Young,A.,
Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              distribution: MGC clone distribution information can be found
                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                AspPheLeuAsnAspProAlaAlaGlnAlaGluProProArgSerProSerArgThrTyr 564
                                                                                                                                                                                                                                                                                                              LeuGlnPheAspGluPheGlnIleValSerSerKisAspAspThrIleLeuIleTrp 544
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Series: IRAK Plate: 62 Row: e Column: 7
This clone was selected for full length sequencing because it
passed the following selection criteria: matched mRNA gi: 4502476.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 2308)
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Submitted (08-2PR-2002) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                      SerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAlaLeuAspProArg
465 ValLeuGluGlyHisGluGluLeuValArgCysIleArgPheAspAsnLysArgIleVal
                                                                                                                                                                                                             AlaProAlaGlyThrLeuCysLeuArgThrLeuValGluHisSerGlyArgValPheArg
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Trissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Prayardion: Life Technologies, Inc.
CDNA Library Prayed by: The I.M.A.G.E. Consortium (LIML)
DNA Sequencing by: National Institutes of Health Intramural
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
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/db_xref="LocusID:8945"
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                                                                                                                                545 AspPheLeuAsnAspProAlaAlaGlnAlaGluProProArgSerProSerArgThrTyr 564 [[[[[[[[[[[[[]]]]]]]]]]]]] 54 1778 GACTICCTAAATGALCCAGCTGCCAAGCTGAACCCCCCCGTTCTCGAACATAC 1837
                                                                                                                                                                                                                                                                                                                                                                                                        AF099932 1712 bp mRNA linear ROD 21-JAN-1999
Nas musculus beta-TrCP protein E3RS-IKappaB mRNA, complete cds.
AF099932.1 GI:4008019
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Mus musculus

Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.

I (Dases 1 to 1712)

Yaron, A., Hatzubai, A., Davis, M., Lavon, I., Amit, S., Manning, A.M.,

Andersen, J.S., Mann, M., Mercurio, F. and Ben-Neriah, Y.

IkappaBalpha-ubiquitin ligase

Mature 396 (6711), 590-594 (1998)
                                                                 1718 CTACAGTTTGATGAATTCCAGATTGTCAGTAGTTCACATGACACAAATCCTCATCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 1712)
Yaron,A., Hatzubai,A., Mercurio,F., Manning,A.M., Andersen,J.S.
Mann,M. and Ben-Neriah,Y.
                         525 LeuGlnPheAspGluPheGlnIleValSerSerHisAspAspThrIleLeulleTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Direct Submission
Submitted (19-OCT-1998) Immunology, Hebrew University of
Bin Karem, Jerusalem 91120, Israel
Location/Qualifiers
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/db_xref="taxon:10090"
1...1710
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                                                                                                                                                                                          GlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPheLysAsnLysProProAspGly
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                                                      AspAlaLysSerLeuCysAlaAlaGluLeuValCysLysGluTrpTyrArgValThrSer
                                                                                                         GATGCCAAATCACTATGTGCTGCTGAACTTGTGTGCAAGGAATGGTACCGAGTGACCTCT
                                                                                                                                                          AspGlyMetLeuTrpLysLysLeuIleGluArgMetValArgThrAspSerLeuTrpArg
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MetAspProAlaGluAlaValLeuGlnGluLySAlaLeuLySPheMetAsnSerSerGlu 20	user CTCP GTCT GTCT	11 GlnArgAspPhelleThrAla 21 CAGAGGATTTCATAACTGCA 61 LeuSerTyrLeuAspAlaLys 62 CTGTCATACTTGCAGGCAGA 83 CTGTCATACTTGGAGGCAGA 84 ANGVALTHASETASGGGAGAGA 74 CGGGGGGCAGGCAGGCAGGGAGGGCAGGGGAGGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGCAGGAGG	SerLeuTrpArgGlyLeuAlaGluArgArgGlyTrpGlvGlnTyrLeuPheLysAsnLys SerLeuTrpArgGlyLeuAlaGluArgArgGlyTrpGlvGlnTyrLeuPheLysAsnLys TCTCTGGGGGAGGCCTGGGAGGCCTGGAGGCTGGGGAGTACTTATTCAAAACAAA ProProAspGlyAsnAlaProProAsnSerPheTyrArgAlaLeuTyrProLysIle11e	261 HiscysArgSerGluThrSerLysGlyValTyrCysLeuGlnTyrAspAspGlnLysIle 280 781 CACTGCCGGAGTGAAACAAGTAAAGGGGTTTACTGTTTACAGTACGACGACCACAAGATA 840 281 ValSerGlyLeuArgAspAsnThrIleLysIleTrpAspLysAsnThrIeuGluCysLys 300 11

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21 ArgGluAspCysAsnAsnGlyGluProProArgLysIleIleProGluLysAsnSerLeu
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                                                                                                                                                                                        MetAspProAlaGluAlaValLeuGlnGluLysAlaLeuLysPheMetAsnSerSerGlu
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        Conservative:
Mismatches:
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Contact: MGC help desk
Bmail: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Sequencing Group at the Stanford Human Genome
Center, Stanford University School of Medicine, Stanford, CA 94305
Web site:
http://www-shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Blickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers,
R. M.
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NSCARLCINOSTVCLTSTAMKTENCVAKAKLANGTSSMI VPRORKLSASY BREKELCY
KYEGWESSOVUEFVELLI SOMCHYOGHINSVLKPMLORDETTALLPARGLUHIABNI
LSYLDAKSLCAAALLVOKEWYRYTSOGHINKKLI ERMYRTDSLIMRGIABRRGHOLTABNI
NKPPDBINAPRNS FYRALYPKI I ODI BTI ESWINGCRHSLORI HICRSTSKGYCLOYD
DOKT VSGELRANTIKI NDRASTLECKRI LITGHTGSCVLCLOYDBRYI I TROSSDSTYRWDV
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NNVUDFDDKX I VSASGDRT I KWWITSTCEFVRTLINGHKRGI ACLOYBRANGSSDN
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TLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILIWDFLNDPAAHAEPPRSPSRTYTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clone distribution: MGC clone distribution information can be foun through the I.M.A.G.E. Consortium/LLML at: http://image.llnl.gov Series: IRAK Plate: B Row: o Column: 21
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 6753209.
                                                                                                                                                                                                        Strausberg, R. Direct Submission Submission Submission Submitted (28-FEB-2001) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="taxon:10090", close="mammary lumor metastatized to lung. Tumor arose us_type="Mammary tumor metastatized to lung. Tumor arose uspontaneously from a senescent normal mammary closed lougrowth infected with the virus MMTV." /close=lib="MCI (CAPP_Lu29" /lab_host="DH10B" (CAPP_Lu29")
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDMA sequences
Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
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/protein_inia=AAN03899.1"
/db_xref="G1:1327846"
/db_xref="LocusID:12234"
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Matches:
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/strain="CZECH II"
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TNC

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1447 501 1507

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/protein id="AAD177551"

/db xref="c1:438327"

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LSYLDAKSLCAABLVCKEWYRVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFK
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DQKIVSGLRDNTIKIWDKSTLECKRILTGHTGSVLCLQYDERVIITGSSBSTVRVWDV
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WYDVDPDKYTUSAGGDRTIKVWNTSPTEFWRTLNGHRRGIACLQYRDBLVVSGSSDN
VIRLWDIEGGACLRVLGGHEELWYSCIR FDNKRINGSKYDGKIKVWDLMAALDPRAPAG
TLCLRTLVEHSGRVPRLQFDEFQIVSSSHDDTILIWDFUNDFAAHBEPPRSPSRYYTY
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     Submitted (04-AUG-1998) Department of Molecular and Cellular Biology, Medical Institute of Bioregulation, Kyushu University, 3-1-1, Maedashi, Higashi-ku, Fukuoka 812-8582, Japan Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91 ATGGACCCGGCAGAGGCGGTGCTGCAGGAAAGCGCTTAAGTTTATGAATTCCTCAGAG
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protein TrcP, F-box protein; contains WD40 repeats"
/codon_start=1
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/db_xref="taxon:10090"
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ATCACAGGCTCCTCAGACTCCACCGTCAGAGTGTGGGATGTAAATGCAGGTGAGATGCTA 1026
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Hatakeyama, S., Kitagawa, M., Nakayama, K., Shirane, M., Matsumoto, M., Hattori, K., Higashi, H., Nakano, H., Okumura, K., Onoe, K., Good, R.A. and Nakayama, K.-I.
Ubiquitin-dependent degradation of IkappaBalpha is mediated by a ubiquitin ligase Skpl/Cul 1/F-box procein FWD1
Proc. Natl. Acad. Sci. U.S.A. 96 (7), 3859-3863 (1999)
                                                                                                                                                                                                                                                                              GTGACCTGCTCCCAAAGACCGTTCCATCGCTGTGGGGATATGGCTTCCCCCAACTGACATC
                                                                                                                                                                                                                                                                                                                                           LysTyrileValSerAlaSerGlyAspArgThrileLysValTrpAsnThrSerThrCys
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                                                                                                                                              ValThrCysSerLysAspArgSerIleAlaValTrpAspMetAlaSerProThrAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                            GluPheValArgThrLeuAsnGlyHisLysArgGlyIleAlaCysLeuGlnTyrArgAsp
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Mus musculus ubiquitin ligase FWD1
AF081887
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Hatakeyama, S. and Nakayama, K.-i.
Direct Submission
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Mus musculus
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Mus muscullus beta-transducin repeat containing protein mRNA,
complete cds.
AF112979
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 110)
Spencer, E., Jiang, J. and Chen, Z.J.
Signal-induced ubiquitination of IkappaBalpha by the F-box protein
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/protein_id="AAD04181.1"
/db_xref="GI:4140718"
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Submitted (10-DBC-1998) Molecular Biology and Oncology, UT
Southwestern Madical Ceter, 5323 Harry Hines Blvd, Dallas,
75235-9148, USA
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1771 TCTCGGACATACACCTACATCTCCAGA 1797
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                                                                      ArgValThrSerAspGlyMetLeuTrpLysLysLeuIleGluArgMetValArgThrAsp
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Mus musculus beta-transducin repeat-containing protein mRNA,
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KYFEQWSESDQVEFVEHLISQMCHYQHGHINSYLKFMLQRDFITALFARGLDHITENI
       1081 GTGACCTGTTCCAAAGACCGTTCCATCGCTGTGTGGGATATGGCTTCCCCCACTGACATC 1140
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Direct Submission
Submitted (01-DEC-1998) Biochemistry, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

Location/Qualifiers
                                                                                                                                                                                                                                                                                     1261 GAATTCGTAAGGACCCTAAATGGGCACAAGCGTGGCATCGCCTGTTTGCAGTACAGAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ThrieuArgArgValLeuValGlyHisArgAlaAlaValAsnValValAspPheAspAsp
                                                                                                                                                                                                                                                      GluPheValArgThrLeuAsnGlyHisLysArgGlyIleAlaCysLeuGlnTyrArgAsp
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                                                                                                     1141 ACCCTCAGGAGGGGGCTGCTGGGACACCGAGCTGCGGTCAATGTTGTAGACTTTGATGAC
                                                                                                                                                      LysTyrIleValSerAlaSerGlyAspArgThrIleLysValTrpAsnThrSerThrCys
                                                                                                                                                                                                    1201 AAGTACATCGTTTCTGCCTCTGGAGATCGATAAAGGTGTGGAACACAAGTACCTGT
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/protein_id="AAD41025.1"
/db_xref="GI:5230822"
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/organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
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DQXIVGGLAENDITKIWDKSTLECKRILTGHTGSVLCLQYBERVIITGSSDSTVRVWDV
NAGEMLDTLITHKCERALHERNNGMWYTCSKORSIAWDMASPTDITLARVLVGHRAA
VNVVDPDDKYIVSASGDRTIKVWNTSTCEFVRTLNGHKRGIACLQYRDRLVVSGSSDN
TIRLWDLECGACLRVLEGHEELVRCIRPDKKRIVSGRYDGKIKYWDLWAALDPRAAG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgValilelleThrGlySerSerAspSerThrValArgValTrpAspValAsnThrGly 337
                                                                        654 AAATTATTCAAGACATAGAGACAATCGAGTCCAACTGGCGCTGTGGGAGACACAGGCTTA
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GluHisLeuIleSerGlnMetCysHisTyrGlnHisGlyHisIleAsnSerTyrLeuLys
                         GAACACCTGATATCTCGAATGTGCCACTATCAGCATGGACATATAAACACTTAACCTTAAG
                                                                                                                                                    GluAsnIleLeuSerTyrLeuAspAlaLysSerLeuCysAlaAlaGluLeuValCysLys
                                                                                                                                                                         GAAAATATACTITCATACCTGGAJGCAAAGTCATTGTGTTCTGCAGAACTGGTATGTAAG
                                                                                                                                                                                                                                                                                                    ArgThrAspSerLeuTrpArgGlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPhe
                                                                                                                                                                                                                                                                                                                                                                                                                 714 CAAAGAATTCACTGCCGGAGTGAACAAGGGAAAGGGGTATACTGTGCGCGGTGCGATGAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1314 GAATGCGGTGCATGTTTGCGGGTTCTGGAAGGACATGAAGAACTGGTCCGGTGCATCCGC
                                                                                                                                                                                                                          GluTrpTyrArgValThrSerAspGlyMetLeuTrpLysLysLeuIleGluArgMetVal
                                                                                                                                                                                                                                                                                                                                                                              LysAsnLysProProAspGlyAsnAlaProProAsnSerPheTyrArgAlaLeuTyrPro
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GAYDGRIKKWMDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDTILI
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/db_xref="taxon:835s"
/cell_type="nocyte"
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AB033280
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Submitted (05-OCT-1999) Masaru Katoh, National Cancer Center,
Genetics Division: Tsukiji 5-chome, Chuo-ku, Tokyo 104-0045, Japan
(E-mail:mkatoh@ncc.go.jp, Tel:81-3-3542-2511(ex.4402),
Fax:81-3-3541-2685)
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                        ValAlaAlaLeuAspProArgAlaProAlaGlyThrLeuCysLeuArgThrLeuValGlu
                                                                                                                                             1434 GTCGCTGCTTTGGACCCCCGTGCGCCTGCAGGGACCCTGTGTCTCCGGACTCTTGTGGAG
                                                                                                                                                                                                  HisSerGlyArgValPheArgLeuGlnPheAspGluPheGlnIleValSerSerHis
                                TTTGATAACAAGAGAATAGTCAGTGGAGCATATGACGGGAAAATTAAAGTGTGGGACCTT
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Molecular cloning and genomic structure of the betaTRCP2 gene
chromosome 5035.1
AB033280.1 GI:7209810
BTRCP2; F-box and WD-repeats protein beta-TRCP2 isoform
Homo sapiens (human)
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Biochem. Biophys. Res. Commun. 269 (1), 103-109 (2000)
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/db_xref="GI:7209811"
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/organism="Homo sapiens'
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/gene="BTRCP2"
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157. .1746
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Katoh, M.
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Email: cgapbs-r@mail.nih.gov Tissue Procurement: Lou Staudt cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Sequencing Group at the Stanford Human Genome Center, Stanford University School of Medicine, Stanford, CA 94305 Web site: http://www-shgc.stanford.edu Contact: (Dickson, Mark) mcd@paxil.stanford.edu Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers, R. M.	Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 27 Row: i Column: 22. Series: Infak Plate: 27 Row: i Column: 22. Location/Qualifiers location/Qualifiers // Organism="Homo sapiens" // Ab_Aref="LocusID:23291" // Ab_Aref="LocusID:23291" // Clone="MGC:21122 IMAGE:4419029"	/tissue_type="Lymph, lymphoma" /dlone_lib="wilH_MGC_85" /lab_bost="billoB" /note="billoB" /note="vector: pcMv-SPORT6" 3721961 /codon start=1 /product="F-box and WD-40 domain protein 1B" /product="f-box and WD-40 domain protein 1B" /protein_id="AAH56213:1" /db_xxef="Gl120070728" /translation="MEDBOYIEDMYTSYMBDQNEDESPRRWTLWOISNGTSSV	1 VSRKRBEGAVOKEKDLCIKTPOWSESDOVEFVEHILSRWCHYQHGHNSYLKPML QRDFITALPRQGLDHIARNILSTLDARSICAAELVCKEWQRVISEGMLWKKLIERWNR QRDFITALPRQGLDHIARNILSTLDARSICAAELVCKEWQRVISEGMLWKKLIERWNR TDPLWAGALSERRGWYCLQYDDEKIISGLRRNSIKTWITGSLBCIKTUTGHTGSNLCLQYD RTQCRSRNSKGWYCLQYDDEKIISGLRNSIKTWMSTATCSKDRSILAWM ASATDITARSVLWGWPAANNYVDFDDKIYSGASDRTIKWWSTSTCEFVRTLNGHKKG IACLQYRDRLWGGSSDWTIRLWDIECGACLRVLBGHEELWRCIRFDNKKIVGHRAKG KIKWWDLQAALDPRAPASTLCLRTLWBHSGRVFRLQFDEFQIISSSHDDTILIWDFLN VPPSAQNETYSR	BASE COUNT 1131 a 928 c 1039 g 1297 t ORIGIN Alignment Scores: 2.42e-214 Length: 4395 Force: Score: 2400.00 Matches: 451 Fercent Similarity: 86.82% Conservative: 43 Best Local Similarity: 79.26% Mismatches: 35 Query Match: 9 Gaps: 40	-569) x BC026213 (1-4395) PProAlaGluAlaValLeuGlnGluLySAlaLeuLySPheMetAs	Db 372 ArgGaGCCCGACTCGGTGATTGAGGACAGGCCATCGAGCTCATGAGCTT 428 Qy 21 ArgGluAspCysAsnAsnGlyGluProbrokrgLys1le1leProGluLysAsnSerLeu 40 429 ArgGaAGATCAAAATGAAGTCCCCAAAGAAAATACTCTT 473 Qy 41 ArgGlnThrTyrAsnSerCysAlaArgLeuCysLeuAsnGlnGluThrValCysLeuAla 60 Db 474 TGGCAG
IleThrGlySerSerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeu 340 ":	1117 GTGACCTGTTCCAAGGACCGCTCCATTGCTGTGGGACATGGCTTCTGCGACCGAC		LysargileValSerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAla	ArgvalPheargLeuGlnPheaspGluPheG CGTGGTTGGGCTCGGTTTGATGGGTTTC I IleLeuIleTrpaspPheLeuasnaspProA I IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	CACTTACATCTCTAGA 1743	DECO26213 4395 bp mRNA linear PRI 08-APR-2002 N Homo sapiens, F-box and WD-40 domain protein 1B, clone MGC:21122 IMAGE:4419029, mRNA, complete cds. N BC056213 GI:20070727 BC026213.1 GI:20070727 MGC. Homo sapiens (human) SM Homo sapiens (human) SM Homo sapiens (human) SM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. E 1 (bases 1 to 4395) S straubserg, R. Direct Submission L Submitted (02-APR-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA NIH-MGC Project URL: http://mgc.nci.nih.gov

101 CysvallysTyrPheGluGlnTrpSerGluSerAspGlnValGluPheValGluHisLeu 120	121 IleserGlnMetCysHisTyrGlnHisGlyHisIleAsnSerTyrLeuLysProMetLeu 140	141 GlnargasppheileThralaLeuProalaargGlyLeuAsphisilealagluasnile 160	161 LeuSerTyrLeuAspAlaLysSerLeuCysAlaAlaGluLeuValCysLysGluTrpTyr 180	181 ArgValThrSerAspGlyMetLeuTrpLysLysLeuIleGluArgMetValArgThrAsp 200	201 SerLeuTrpArgGlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPheLysAsnLys 220	221 ProproAspGlyAsnAlaProProAsnSerPheTyrArgAlaLeuTyrProLysIleIle 240	241 GlnaspileGluThrileGluSerashTrpargCysGlyArgHisSerLeuGlnArgile 260	261 HisCysargSerGluThrSerLysGlyvalTyrCysLeuGlnTyraspaspGlnLysIle 280	281 ValSerGlyLeuArgAspAsnThrIleLysIleTrpAspLysAsnThrLeuGluCysLys 300	301 ArgileLeuthrdlytisthrdlyserValLeuCysLeuGlnTyrAsGGluArgVallle 320	321 IleThrGlySerSerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeu 340	341 ASDTDrLeullefisHisCysGluAlaValLeuHisLeuArgPheAsDAsDGlyMetMet 360	361 ValThrCysSerLysAspArgSerIleAlaValTrpAspMerAlaSerProThrAspIle 380	381 ThrLeuArgArgValLeuValGlyHisArgAlaAlaValAsnValValAspPheAspAsp 400	401 LystyrilevalSeralaserGlyAspArgthrileLysvalTrpAsnThrSerThrCys 420	421 GlupheValargThrLeuAsnGlyHisIvSargGlyIleAlaCysLeuGlnTyrArgAsp 440	441 ArgueuvalvalserGlyserseraspasnThrileargleuTrpaspileGluCysGly 460
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461 AlaCysLeuArgValLeuGluGlyHisGluGluLeuValArgCysIleArgPheAspAsn 480

qq	1632	
ολ	481	481 LysArglleValSerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAla 500
qq	1692	AAGAGGATTGTCAGTGGGGCCTATGATGGGAAAATTAAAGTTTGGGACTTGCAAGCTGCT 1751
δ,	501	
qq	1752	CTIGACCCTCGAGCCCCAGCAAGCACATIGIGITITICGCACATTGGTGGAACATTCTGGA 1811
ολ	521	521 ArgValPheArgLeuGlnPheAspGluPheGlnIleValSerSerSerHisAspAspThr 540
qq	1812	CGTGTGTTTCGGCTCCAGTTTGATGAGTTTCAGATCATCATCAGCAGCTCCCCATGATGACACT 1871
λŏ	541	IleLeulleTrpAspPheLeuAspAspProAlaAlaGlnAlaGluProProArgSerPro 560
q	1872	
δ	561	SerArgThrTyrThrTyrIleSerArg 569
qq	1932	TCCAGAACATACACTTACATCTCTAGA 1958
124	io Camon	Sparch completed. Optober 22 2003 16.26.46

Search completed: October 22, 2003, 16:26:46 Job time : 5030 secs

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GenCore version 5.1.6
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October 22, 2003, 14:49:27 ; Search time 2665 Seconds (without alignments) 5189.211 Million cell updates/sec ein - nucleic search, using frame_plus_p2n model

US-09-601-168B-2

......PAAQAEPPRSPSRTYTYISR 569 1 MDPAEAVLQEKALKFMNSSE. Xgapop 10.0 , Xgapext Ygapop 10.0 , Ygapext Fgapop 6.0 , Fgapext Delop 6.0 , Delext **BLOSUM62** score: table:

22781392 segs, 12152238056 residues

ä

45562784 umber of hits satisfying chosen parameters:

DB seq length: 0 DB seq length: 2000000000

cessing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

line parameters:

Erame+ p2n. model - DEV=xlp

2 1/USPTO_spool p/US09601168/runat_22102003_100546_17791/app_query.fasta_1.711

2 1/USPTO_spool p/US09601168/runat_22102003_100546_17791/app_query.fasta_1.711

- OFWT=fastap - SUFFIX=rst - MINMATCH=0.1 - LOOPEL=0 - LOOPEXT=0

Dits - START=1 - END=-1 - MATRIX-blosum62 - TRANS=numan40.cdi - LIST=45

SN=200 - THR_SCORE=pct - THR MAX=100 - THR MIN=0 - ALIGN=15 - MODE=LOCAL

SOSG01168 @CGN 1 1 2874 @runat_22102003 100546_17791 - NCPU=6 - ICPU=3

- LARGEQUERY - NEG=SCORES=0 - WAIT - DSPBLOK=100 - LONGLOG

REGUT=120 - WARN TIMEOUT=30 - THERADS=1 - XGAPOP=10 - XGAPEXT=0.5 - FGAPOP=6

F=7 - YGAPOP=10 - YGAPEXT=0.5 - DELOP=6 - DELEXT=7

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em gss phg: *

gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	032221 Mus mus	2227 Mus mus	1532 Mus mus	0760 CDA46-H	35560 AGENCOUR	3993 AL898993	30902 AGEN	14526 UI-M-FY0	14304 UI-M-EHO	14188 UI-M-EXO	CA971789 AGENCOURT	7271 III -M-FY0	0936 UI-M-GH0	71102 UI-N	9909	16650 UI-M-FI0	50387	18002 679219 N	20826 UI-M-FWO	24867 UI-M-FY0	90902	10482 AGENCOUR	16901	70327	# / ZR	7775 27	12586 7	1016 ALS31016	53637	BQ425358 AGENCOURT	19157	AL642623 AL642623	BU611165 UI-M-FIO-	BU913488 AGENCOURT	ξ	AL882125 AL882125	CA513313 UI-R-FJ0-	BX4	AU002962 AU002962	M-ID 6880	13203 UL-M-LWWW.	N /050/9 9695*
ID	AK032221	AKOR523	AK04153	CD50076	CA98556	3993	CA98090	CB24452	BM94430	BQ44418	CA9717	CA30707	CB52093	BQ77110	8903	CB24665	BU75038	CA34800	CA32082	CB52486	CA79090	BQ94048	CB24690	BU17032	BIOSEZ	\$1.879775	BM5425	AL531016	BU46363	BQ4253	BX34915	AL642623	BU6111	BU91348	BM46528	AL882125	CA5133	BX41947	AU002962	CD3508	BU61320	CA34569
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ALIGNMENTS

RESULT 1 AK032221

AK032221
Mus musculus adult male olfactory brain cDNA, RIKEN full-length enriched library, clone:6430504823 product:beta-transducin repeat containing protein, full insert sequence.

AK032221.1 GI:26082733
HTC; CAP trapper.

Mus musculus (house mouse)
Mus musculus (house mouse)
Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Murinae; Musinse. DEFINITION ORGANISM ACCESSION VERSION KEYWORDS SOURCE

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Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-resegsc.riken.go.jp, URL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
Fax:81-45-503-9216
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/clone lib="RIKEN full-length enriched mouse cDNA library"
/dev stage="adult"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="beta-transducin repeat containing protein
(MGD|MGI:1338871, GB|NM_009771, evidence: BLASTN, 100%,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128 AGGICTCIGIGGCIGGCIGCICCAGCCIGGCGGACAGCAIGCCITCGCIGCGAIGCCIG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         308 caacagcreteccaegcrirecaraaaccaagacagrareraacaagcacretar
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MetAspProAlaGluAlaValLeuGlnGluLysAlaLeuLysPheMet----
                                                                                                                                                                                                                                                                                                                                                                                                                                       prepare mouse tissues.
Please visit our web site for further details.
URL:http://genome.gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
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/strain="C57BL/6J"
/db_xref="PANTOM_DB:6430504E23"
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/clone="6430504E23"
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Best Local Similarity:
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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

Nature 420, 563-573 (2002)

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                                              Carninci, P. and Hayashizaki, Y.
High-efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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	AK083257 Mus musculus adult male hippocampus CDNA, RIKEN full-length enriched library, clone:C630031K01 product:beta-transducin repeat containing protein, full insert sequence. AK083257 AK083257 AK083257.1 G1:26101148 HTC; CAP trapper. Mus musculus (house mouse) Mus musculus (house mouse) Mus musculus (house acuse) Mus musculus (house mouse)	Mammalia, Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mu carninci, P. and Hayashizaki, Y. Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999) 99279253 10349636 2 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatay, M., and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new ge conome Res. 10 (10), 1617-1630 (2000) 20499374 11042159	3 Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Ishi,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A., Yamamoto,R., Instamoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuntra,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system-384-format Genome Res. 10 (11), 1757-1771 (2000)	
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tCyshisTyrGlnHisGlyHisIleAsnSerTyrLeuLysProMetLeuGlnArgAspPh 14- GTGTCACTACCAGCATCAACTCCTACCTAAAACCTATGCTGCAGAGGCATTT 60 eIleThrAlaLeuProAlaArgGlyLeuAspHisIleAlaGluAsnIleLeuSerTyrLe 16- CATAACTGCAGCAGAGGGGTCTGGACACATGGTGAGAACATTCTTGTCATACTGCATAACTGCAGAGGGGTTGHIIIIIIIIIIIIIIIIIIIIIIIIIIIII	788 AGGCCTGGCGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG		1208 TCACCACTGTGAAGCGTTCTGCACCTGGGGTTCAATAATGGCATGATGATGACGTGTTC 1267 364 rLysAspArgSerIleAlaVaITrpAspMetAlaSerProThrAspIleThrLeuArgAr 384 1268 CAAAGACGGTTCGTGTGTGGGTTATGGCTTCCCCACTGACATCACCTCAGGAG 1327 384 GVALLeuValGlyHisArgAlaAlaValAsVAlValValAspPheAspAspLySTVI1EVA 404 1328 GGTGCTGGTGGGACACCGAGCTGGGTGATGTTGTAGATTTGTAGATACACATACAT	424 GThrLeuAsnGlyHisLySargGlyIlealacysLeuGlnTyrargAspArgLeuValVa 444 1448 GACCCTAAATGGGCACACAGCGTCGCTTTTCCAGTACAGACACAGCTGGTGGT 1507 444 ISerGlySerSerAspAsnThrIleArgLeuTrpAspIleGluCysGlyAlaCysLeuAr 464

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981 TGAAACAAGTAAAGGGGTTTACTGTTTACAGTACGACGACCAGAAGATAGTCAGCGGCCT 1040
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                                                                                                                  81 ATGGACCCGGCAGAGGCGGTGCAGGAGAAAGCGCTTAAGTTTATGTGCTCTATGCCC 140
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                                                                                                                                                                                                                                          141 AGGTCTCTGTGGCTGGGCTGCTCCAGCCTGGCGGACAGCATGCCTTCGCTGCGATGCCTG 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        104 rPheGluGlnTrpSerGluSerAspGlnValGluPheValGluHisLeuIleSerGlnMe 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      204 gGlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPheLysAsnLysProProAspGl 224
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                224 yAsnAlaProProAsnSerPheTyrArgAlaLeuTyrProLysIleIleGlnAspIleGl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              244 uThrileGluSerAsnTrpArgCysGlyArgHisSerLeuGlnArgIleHisCysArgSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              921 GACAATAGAGTCCAATTGGAGATGTGGGCGACATAGTTTACAGAGAATCCACTGCCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                             AsnSerCysAla-ArgLeuCysLeuAsnGlnGluThrValCysLeuAlaSerThrAlaMe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   321 AACAGCTGTGCCCAGGCTTTGCATAAACCAAGAGACAGTATGTCTAACAAGCACTGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     381 GAAGACTGAAAATTGTGTGGCCAAAGCCAAACTTGCCAATGGCACTTCCAGCATGATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        441 GCCCAAGCAGCGGAAACTCTCAGCAAGCTATGAGAAGGAAAAGGAGCTGTGTGTCTAAGTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                621 CATAACTGCACTGCCAGGACGGGTCTGGACCATCGCTGAGAACATTCTGTCATACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   164 uAspAlaLysSerLeuCysAlaAlaGluLeuValCysLysGluTrpTyrArgValThrSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      681 GGACGCCAAGTCACTGTGTGCTGCTGCTCGTGTGCAAGGAATGGTACCGCGTGACGTC
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                                                                                                                                                                                                                                                                                        ------AsnSerSerGluArgGluAspCys
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Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKBN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Rangawa, 230-0045, Japan (E-maligenome-res@gsc.riken.go.jp/, Tel:81-45-503-9222, Prax:81-45-503-9216)
Hofmann, M., Hume, D. A., Kamiya, M., Lee, N. H., Lyons, P., Marchiconi, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriguez, I., Sakmoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K. F., Suzuki, H., Toyo-Oka, K., Wang, K. H., Weitz, C., Whiteker, C., Wilming, L., Wunshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S.
                                                                                                                                                                                                                                                                                                             The FANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length CDNs

Nature 420, 563-573 (2002)

( Dases I to 2970)
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'clone_lib="RIKEN full-length enriched mouse cDNA library'
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I, evidence: BLASTN, 100%,
                                                                                                                                                                             Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
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Please visit our web site for further details.
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'db_xref="taxon:10090"
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/mol_type="mRNA"
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Kawai, J., Shinagawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakaa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Aizawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, T., Saito, T., Saito, T., Saito, T., Saito, T., Saito, T., Saito, T., Racota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T., Fleischman, W., Gasterland, T., Gissi, C., King, B., Kochiwa, H., Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., Kochiwa, H., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Anno, H., Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Anno, H., Baldarelli, R., Barsh, G., Brownstein, M.J., Bult, C., Fletcher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D., Hofmann, M., Hume, D.A., Kanisha, M., Lee, N.H., Lyons, P., Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriguez, T., Sakanoco, N., Sasaki, H., Sato, K., Schombach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Toyo-oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y. Punctional annotation of a full-length mouse cDNA collection
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                                Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Komo,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                               Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T. Tashiro, H., Itoh, M., Suni, N., Ishi, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegani, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watshikayi, K., Yonake, S., Inoue, K., Togawa, K., Tanaka, T., Natsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer
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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length CDNAs
Nature 420, 563-573 (2002)
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Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
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Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999) 9279253 10349636

Mus musculus (house mouse)

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HTC, CAP trapper.

1881 ACACCTACATCTCCAGA 1897

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TACTGTTTACAGTACGACGACCAGAAGATAGTCAGCGGCCTTCGAGACAACACCATCAAG
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cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Becyclopedia Project of Genome Exploration Research Group in Riken Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.

Please visit our web site for further details.

URL:http://genome.gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/
Location/Qualifiers
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RIQCRSENSKGVYCLQYDDDKIISGLRDNSIKIWDKSSLECLKVLTGHTGSVLCLQYD
ERVIVTGGSSTYRRWWDYNGEVLMYTIHNREANDRAWDM
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F-BOX AND WD-REPEATG PROTEIN BETA-TRCP2) homolog [Homo
sapiens] (SWIESPROT[O9UKB1, evidence: FASTY, 99.2%ID,
100%length, match=1587)
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IACLQYRDRLVVSGSSDNTIRLMDIECGACLRVLEGHEELVRCIRFDNKRIVSGAYDG
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/clone_lib="RIKEN full-length enriched mouse cDNA library"
Group Phase I & II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
6 (bases I to 3824)
                                                                                                                                                                                                                                                          Bono, H., Carninci, P.,
                                                                                                                                                                                                                                 Padachi, J. Aizawa, K. Akimura, T., Arakawa, T., Bono, H., Carninci, P. Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramcok, K., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Hiraoka, T., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kawukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Nakamura, M., Mishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsaco, N., Okazaki, Y., Salto, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sogabo, Y., Tagami, M., Tagawa, A., Tahinagawa, A., Shiraki, T., Tamaka, T., Tomaru, A., Takahashi, P., Takaku, Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A.
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Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of
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/mol_type="mRNA"
/fstrain="C57BL/61"
/db_xref="FANTOM_DB:A630019L11"
/db_xref="taxon:10090"
/clone="A630019L11"
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3824 bp mRNA linear HTC 05-DEC-2002
Mus musculus 3 days neonate thymus cDNA, RIKEN Full-length enriched
library, clone:A63001911 product;F-DSX/WD-REPEAT PROTEIN 1B (F-BOX
AND WD-REPEATS PROTEIN BETA-TRCP2) homolog [Homo sapiens], full
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         1708 AAAATTAAAGTGTGGGATCTTATGGCTGCTTTGGACCCGCGTGCTCCAGCAGGGACTCTC 1767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria; Rođentia; Sciurognathi; Muridae; Murinae; Mus.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
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Nature 409 (6821), 685-690 (2001)
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Meth. Enzymol. 303, 19-44 (1999)
99279253
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                                                                                                                511 CysleuArgThrLeuVal 516
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상담임원론

AAAGTGCTAACGGGCCACAGGGCTCTGTCC IlleThrClySerSerAspSerThrValArgV :::	9
•	RESULT S CD5.00760 LOCUS DEFINITION ACCESSION VERSION VERYWORDS SOURCE ORGANISM AUTHORS TITTLE
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962 GTCTCGACTAATGGCCAGTCGGG-AAGGAACGGTCTCCCTCCCCGCACTACACTTACATT 1020
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AGENCOURT 11076787 NICHD XGC OO1 Xenopus laevis cDNA clone
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363 GCGGTTCTTCACCTACGCTTCGCCAACGGATTGATGGTCACCTGCTCCAAGGACCGCTCG 422
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Xenopus laevis
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Martha Rebbert, Steven L. Klein, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: NCI-CGAP clone distribution information can http://image.llnl.gov
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National Cancer Institute, Cancer Genome Anatomy Project (CGAP)
                                                                  369 IlealaValTrpAspMetAlaSerProThrAspIleThrLeuArgArgValLeuValGly
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/tissue_type="heads and internal organs combined"
/dev stage="adult"
/dev stage="adult"
/clone_lib="SHGC-CDA"
/note="Vector: lambda ZAP Express/pBK-CMV; Site_1: EcoRl
/soften DNA library was generated using the ZAP-cDNA method organ cDNA library was generated using the ZAP-cDNA method by Stratagene. First strand cDNA synthesis was primed with a a 50 bp linker primer containing an oligo dT sequence preceded by a synthetic XhoI site. 5 prime adaptors were used containing an EcoRl cohesive end. The finished cDNAs were inserted in to the ZAP express vector unidirectionally in the sense orientation with respect to the lack promocer of pBK-CMV. An amphified library was prepared from approximately 3 million primary clones in the lambda ZAP Express vector. In vivo excision was then used to generate individual pBK-CMV phagemid clones for
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                            HHMI and Department of Developmental Biology
Stanford University School of Medicine
Beckman Center B300, 279 Campus Drive, Stanford,
Tel: 650 725 5954
Fax: 650 725 7739
Email: kingsley@cmgm.stanford.edu
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23
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                                                                                                                                                                                                                                                                                                                                                                  /organism="Gasterosteus aculeatus"
mol_type="mRNA"
/strain="Salinas river, CA"
db_xref="taxon:6293"
/clone="CDA46-H04"
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Conservative:
Mismatches:
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Location/Qualifiers
1. .1136
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304 c 302
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AL898993 AGC-egg Silurana tropicalis cDNA clone TEgg019e21 3', mRNA
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Silurana tropicalis
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
Xenopodinae, Silurana.
I (bases 1 to 895)
Taylor,R., Ashurst,J.L., Croning,M.D.R., Zorn,A.M. and Rogers,J.
Sanger Xenopus tropicalis EST project 2002
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/idbne_libe_xGG_egg"
/note="Vector: pCSIO7; Site_1: EcoRI: Site_2: NotI; cD was oligo dT primed from Sug of poly A+ RNA from egg.
EcoRI:NotI cut cDNA was then ligated into pCSIO7 with EcoRI at the 5' end and NotI at the 3' end"
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                                                                                                                           -ProAla-GlyThrLeuCysLeuArg-ThrLeu-ValGluHisSerGlyArgValPhe--
                 CTGGAAGGACATGAAGTGGTCCGGTGCATCCGCTTTGATAACAAGAGAATAGTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence is from a Xenopus Gene Collection (XGC) library constructed by Aaron M. Zorn.
Location/Qualifiers
1. 895
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/db_xref="taxon:8154"
/clone="Tegg019e21"
/dev_stage="egg"
/lab_host="Escherichia coli XL1-blue"
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1264
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000
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anger Xenopus tropicalis EST project 2001
TROPICALIS SEQUENCE ID: TEGG019e21.qlkT7
Sequencing primer: T7
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Matches:
Conservative:
Mismatches:
Indels:
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1390.00
98.15%
97.78%
45.81%
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Sanger Centre
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DB:
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| /organism="Xenopus laevis"
| /mol_type="mRNA"
| /db_xref="taxon:8355"
| /don=="MAGE:6860098"
| /tissue_type="ocoytes"
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| /clone lib="NICHD XGC 001"
| /clone lib="NICHD XGC 001"
| /clone lib="NICHD XGC 001"
| /cloned unidirectionally. Primer: Oligo dT. Average insert
| size 2.2 kb. Constructed by Life Technologies."
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278
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6
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Matches:
Conservative:
Mismatches:
Indels:
Gaps:
60
 Plate: LLAM14473 row: o column
High quality sequence start: 16
High quality sequence stop: 717.
Location/Qualifiers
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// Organism="Xenopus laevis"
// wol_type="mRNA"
// wol_type="mRNA"
// wol_type="mRNA"
// wol_tselege="Taxon:8355"
// wole="IMAGE:685574"
// tissue_type="egg="Taxon:8355"
// wole="Westor: pBluescript SK-; Site i: NotI; Site 2:
// kost="Westor: pBluescript SK-; Site i: NotI; Site 2:
// wole="Westor: pBluescript SK-; Site i: NotI; Site 2:
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// wole="Westor: pBluescript SK-; Site i: NotI; Site 2:
// wolloom wolloom wolloom wolloom site is a Xenopus Gene Collection (XGC) library."
// wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom wold wolloom wolloom wolloom wolloom wolloom wolloom wolloom wolloom
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J.B. Gurdon (Wellcome/CRC Institute)

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: XG clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM1498 row, j column: 05

Plate: LLAM1498 row, j column: 05

High quality sequence start: 15

High quality sequence stop: 619.
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Matches:
Conservative:
Mismatches;
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MAKGE:6865574 5', mRNA sequence.
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: N. Garrett, P. LeMaire, A.M. Zorn, and J.B.
Gurdon (Wellcome/CRC Institute)
CDNA Library Preparation: N. Garrett, P. LeMaire, A.M. Zorn, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vertebrata; Euteleostomi;
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      834 ATCATAACCGGCTCTTCTGACTCTACCGTCCGGGTTTGGGACGTAAACACAGGAGAAATG
                                                                                                                774 TEGAACACTCTGATTCACCACTGTGAGGCTGTGCTACATTTGAGGTTTAACAATGGTATG
                                                                                                                                                                          MetValThrCysSerLysAspArgSerIleAlaValTrpAspMetAlaSerProThrAsp
                                                                                                                                                                                                                                                                                           IleThrleuArgArgValLeuValGlyHisArgAlaAlaValAsnValValAspPheAsp
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                                                            LeuAsnThrLeuIleHisHisCysGluAlaValLeuHisLeuArgPheAsnAsnGlyMet
                                                                                                                                                                                                                                                                                                                                              ATCACATTACGAAGAGTICTAGTAGGCCACCGAGCTGCCGTAAATGTGGGTGGACTTTGAT
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Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
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National Cancer Institute, Cancer Genome Anatomy Project
Tumor Gene Index
Unpublished
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Xenopus laevis
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Best Local Similarity:
Query Match:
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UI.M-FYO-cdq-k-22-0-UI.rl NIH_BMAP_FYO Mus musculus cDNA clone
UI.MAGE: 6833135 5', mRNA sequence.
CB244526
CB244526.1 GI:28366170
EST.
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Contact: Robert Strausberg, Ph.D.
Email: cgapbs: rawmin.nih.gov
Tissue procurement: Dr. Jim Lin, University of Iowa
Tissue procurement: Dr. Jim Lin, University of Iowa
CDNA Library preparation: Dr. M. Bento Soares, University of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lln.gov
                                                                                                                                 699
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Mus musculus
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                             TyrAsp-GlyLyslleLysValTrpAspLeu-ValAlaAlaLeuAspProArgAla---P
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National Institutes of Health, Mammalian Gene Collection (MGC)
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directionally into pXX-Asc vector. The library tag directionally into pXX-Asc vector. The library tag sequence located between the Not I site and the polyA tail is AGGGAGACAG. This library was created for the University lows Brain Anatomy Project (BMAP): 'Gene Discovery in the Developing Mouse Nervous System', supported by National Institute of Mental Health (NIMH), Hemin Chin, Ph.D., program coordinator."
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241 AGCAATGGACTGATGGTCACTTGTTCCAAGGACCGTTCCATTGCCGTGTGGGACATGGCT 300
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61 AGCTTGGAATGTTTGAAAGTGCTAACGGGCCACACAGGCTCTGTCCTCTGCCTCCAGTAT 120
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                                                                        121 GATGAGCGAGTCATTGTAACTGGTTCTTCAGACTCCACGGTGAGAGTCTGGGATGTGAAC
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                                             316 AspGluArgValIleIleThrGlySerSerAspSerThrValArgValTrpAspValAsn
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/tissue_type="whole brain"
/dev_stage="embryolable"
/dev_stage="embryolable"
/lab_host="DH10B (TI phage resistant)"
/clone_lib="NIH_BMAP_EH0p"
/clone_lib="NIH_BMAP_EH0p"
/clone_lib="Organ: brain; Vector: pYX-Asc; Site_l: EcoR I;
/note="Organ: brain; Vector: pYX-Asc; Site_l: EcoR I;
Site_2: Not l: The library was constructed according to
Bonaldo, Lennon and Soares, Genome Research, 6:791-806,
1996. Denatured mRNa was size fractionated on a 1% agarose
gel. First strand cDNA synthesis was primed with an
oligo-dT primer containing a Not I site. Double stranded
cDNA was size selected according to mRNA size fraction,
ligated with EcoR I adaptor, digested with Not I, and then
cloned directionally into pYX-Asc vector. The library tag
sequence located between the Not I site and the polyA tail
is CAGCCACGAC: This library was created for the
University of Iowa Mouse Brain Molecular Anatomy Project
(BMAP): Gene Discovery in the Developing Mouse Nervous
System', supported by National Institute of Mental Health
(NIMH), Hemin Chin, Ph.D., program coordinator."
                                        BM944304
UI-M-EHOp-bvq-m-18-0-UI.rl NIH_BMAP_EHOp Mus musculus cDNA clone
IMAGE:5695673 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                              Bmail: cgapbs-r@mail.nih.gov
Trisue Procurement: Dr. James Lin, Univeristy of Iowa
CDNA Library preparation: Dr. M. Bento Soares, Univeristy of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
CDNA Library Arrayed by: Dr. M. Bento Soares, Univeristy of Iowa
CLORE Distribution: MGC clore distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
This clone was contributed by the Brain Molecular Anatomy Project
(BMAP)
                                                                                                                                                                                                      Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 810)
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Conservative:
Mismatches:
Indels:
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/mol_type="mRNA"
/strain="C57BL/6"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                   Unpublished
Contact: Robert Strausberg, Ph.D.
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Location/Qualifiers
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BQ444188 1778 bp mRNA linear EST 29-MAY-2002 UI-M-EXO-bxj-1-06-0-UI.rl NIH_BMAP_EXO Mus musculus cDNA clone IMAGE:5709077 5', mRNA sequence.
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Email: gapbs-r@mail.nih.gov
Tissue Procurement: Dr. James Lin, Univeristy of Iowa
CDN Library preparation: Dr. M. Bento Soares, University of Iowa
CDN Library Arrayed by: Dr. M. Bento Soares, University of Iowa
DNA Sequencing by: Dr. M. Bento Soares, University of Iowa
Clone Distribution: MGC Clone distribution information can be
                                                                                                                                                                                                                                                            Mus musculus (house mouse)
Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
I (Dases 1 to 778)
IIH-MCC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Tissue Procurement: N. Garrett, P. LeMaire, A.M. Zorn, and J.B.
Gurdon (Wellcome/CRC Institute)
cDNA Library Preparation: N. Garrett, P. LeMaire, A.M. Zorn, and
J.B. Gurdon (Wellcome/CRC Institute)
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: XGC clone distribution information can be
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Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
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1 (bases 1 to 1002)
NCI-GGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP)
Tumor Gene Index
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                                                                                                                                                                                                                                                                                                                ArgSerGluThrSerLysGlyValTyrCysLeuGlnTyrAspAspGlnLysIleValSer
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                              AspGlyAsnAlaProProAsnSerPheTyrArgAlaLeuTyrProLysIleIleGlnAsp
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM13766 row: d column: 24
High quality sequence start: 98
High quality sequence stop: 710.
Location/Qualifiers
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                              http://image.llnl.gov
This clone was contributed by the Brain Molecular Anatomy Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83
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found through the I.M.A.G.E. Consortium/LLNL at:
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Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                    /organism="Mus musculus"
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97.68%
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atch:
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83 61 103

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Alignment Scores:
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             ACCESSION
VERSION
KEYWORDS
SOURCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             euHisLeuArg---PheAsnAsnGly-MetMet-ValThrCysSerLysAspArgSerIl 369
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                                                                                                                                                                                                                                                                        258
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  1002
258
10
14
14
 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                   (1-1002)
                                                                                    (1-569) x CA971789
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2.57e-135
1323.50
92.41%
88.97%
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ocal Similarity:
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                                                  Match:
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90
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CA975032 935 bp mRNA linear EST 06-JAN-2003 AGENCOURT_11076265 NCI_CGAP_ZEMb2 Danio rerio cDNA clone

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                                                                                                                                                            Danio rerio (zebrafish)
Danio rerio
Banio rerio
Banio rerio
Banio rerio
Banio rerio
Actinopherygii, Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Danio.
I (bases 1 to 935)
INH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Leonard I. Zon, M.D.
Tissue Procurement: Leonard I. Zon, M.D.
ONA Library Preparation: Invitrogen Corp
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMA4323 row: c column: 02
High quality sequence start: 24
High quality sequence start: 24
High quality sequence stop: 652.
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Matches:
Conservative:
Mismatches:
Indels:
mRNA sequence.
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Mus musculus

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;

Rammanlia; Eutheria; Rodentia; Sciurognathi; Muridae, Murinae; Mus.

I (Dases 1 to 850)

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

Londact: Robert Strausberg, Ph.D.

Email: cgapbs-rômail.inh, gov

Tissue Procurement: Dr. Jim Lin, University of Iowa cDNA Library preparation: Dr. M. Bento Soares, University of Iowa CDNA Library preparation: Dr. M. Bento Soares, University of Iowa DNA Sequencing Dy: Dr. M. Bento Soares, University of Iowa Clone Distribution: MGC Clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           euGln-PheAspGlu-PheGlnIleVal-SerSerSerHisAspAspThrIle---LeuI 543
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                                                                                                                                                                                                                                                                                                                                             565 AATGGTCATAAGCGAAGAATTGCTTGCTTGCTACAGTACAGACCGACTTGTGGTCAGCGGC 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      745 AGCGTATGACGGTAAAATTTAAGTATGGGACCTACAAGCTGCACTTTGATCCACGCGCTC 804
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WEND LINEAR Linear EST 27-NOV-UL-M-FYO-ccy-f-17-0-UL-M-BMAP_FYO Mus musculus cDNA clone IMAGE: 6826098 5', mRNA sequence.
CA327271

CA377271 GI:24545369
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                                                               ArgSerIleAlaValTrpAspMetAlaSerProThrAspIleThrLeuArgArgValLeu
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Email: cgapbs-romail.nih.gov

Tissue Procurement: Dr. Jim Lin, University of Iowa

Tissue Procurement: Dr. Jim Lin, University of Iowa

CDNA Library Preparation: Dr. M. Bento Soares, University of Iowa

DNA Sequencing by: Dr. M. Bento Soares, University of Iowa

Clone Distribution: Distribution information can be found at

http://genome.uiowa.edu/distribution/mousefl.html

This clone was contributed by the Brain Molecular Anatomy Project

(BMAP)
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Iowa Brain Anatomy Project (BMAP): 'Gene Discovery in the Developing Mouse Nervous System', supported by National Institute of Mental Health (NIMH), Hemin Chin, Ph.D., program coordinator."

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Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                    SerLeuTrpArgGlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPheLysAsnLys
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                                                                                                                                                                                                                                                                                                                                       e present invention describes an F-box motif protein of ubiquitin gase SCF complex which promotes the ubiquitination of IkappaB or ta-catenin and is constituted by Skpl protein, Cull protein and a mplex (SCF complex) of F-box protein containing F-box motif and Wato peat motif and has the amino acid sequence of 45 residues (AAB12811) one of two ScP residue sequences (AAB12812, which is mouse ubiquitin gase FWD1 protein) and (AAB12813, which is human beta-transducin peat containing protein (beta-TrCP)). The F-box protein can be used for e gene therapy of colon cancer by being recombined to a virus vector. esent invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                   ta-transducin repeat containing protein; beta-TrcP; Skplp; oteosome degradation pathway; Vpu protein; beta-catenin; man immune deficiency virus-1; HIV-1; cellular protein; IKappaB; iquitinylation; phosphorylated protein; tumour; apoptosis; Alzheimer's; tivizal; antitumour; cell cycle regulation; protein degradation; danti-inflammatory; osteo-articular inflammation; acute inflammation; mour necrosis factor; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    present sequence encodes a human beta-transducin repeat containing tein (beta-TrcP). The protein directs proteins to the proteosome radation pathways. The protein is able to interact with the Vpu tein of human immune deficiency virus-1 (HIV-1), cellular proteins ppaB or beta-catenin (bc) and/or protein Skplp. The protein controls quitinylation of phosphorylated protein and thus their targeting to teosomes for degradation. Depending on whether the process is libited or promoted, the result may be delayed breakdown of CD4 (in es of HIV-1 infection); increased activity of IkB (and thus reduced livity of NFkappaB) and increased degradation of mutant bc in tumour
521 ArgValPheArgLeuGlnPheAspGluPheGlnIleValSerSerHisAspAspThr
                     1561 AGAGTTTTTCGACTACAGTTTGATGAATTCCAGATTGTCAGTAGTTCACATGATGATGACACA
                                                                      IleLeuIleTrpAspPheLeuAsnAspProAlaAlaGlnAlaGluProProArgSerPro
                                                                                                         1621 Arctroatcroscatroctaaarcaactccaccaactcaaccccccccrr
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/note= "beta-transducin repeat containing protein"
                                                                                                                                                                                                                                                                                                                                                                               NA encoding a human beta-transducin repeat containing protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             / human beta-transducin repeat containing protein and its gments useful as, or to screen for, antiviral, antitumour, i-inflammatory and anti-Alzheimer's agents
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                 patients. The beta-Trop protein, and its active peptide fragments, or inuclaic acid, are used to screen for anti HIV-1 agents (antivirals), antitumour agents that disrupt cell cycle regulation or protein degradation in human tumour cells, and anti-inflammatcry agents that disrupt activation by NFkappaB. Fragments of the protein are also useful for trearing osteo-articular inflammation or acute inflammation obsociated with release of tumour necrosis factor.

(Updated on 20-MAR-2003 to correct PA field.)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 SerThrAlaMetLysThrGluAsnCysValAlaLysThrLysLeuAlaAsnGlyThrSer
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    reduced apoptosis)
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Conservative:
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HisCysArgSerGluThrSerLysGlyValTyrCysLeuGlnTyrAspAspGlnLyslle
                              CACTGCCGAAGTGAAACAAGCAAAGGAGTTTACTGTTTACAGTATGATGATGAAAATA
                                                                                              ValSerGlyLeuArgAspAsnThrIleLysIleTrpAspLysAsnThrLeuGluCysLys
                                                                                                                                       910 GTAAGCGGCCTTCGAGACAACACAATCAAGATCTGGGATAAAAACACATTGGAATGCAAG
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DNA; 2151

151229 standard;

(first entry)

SEP-2000

5,1229;

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This DNA encodes human beta-TrCP, an F-box/ND protein family member, which has been shown to have homology to human E3 ubiquitin ligase (E3). E3 enhances ubiquitination of phosphorylated I-kappa-B, an inhibitor protein of nuclear factor kappa-B (NF-kappa-B). Understanding I-kappa-B degradation via the ubiquitin pathway is useful for identifying modulators of this process for use in treating diseases associated with activation of NF-kappa-B. In vitro analysis suggests that deletion of the F-box results in a protein that functions as a dominant negative molecule in vivo. Transfert over-expression of enloapenous I-kappa-B and eletion mutant) inhibited the degradation of endogenous I-kappa-B-alpha in stimulated Jurkat cells, resulting in accumulation of phosphorylated in stimulated Jurkat cells, or screen for modulate NF-kappa-B cotivity. E3 and beta-TrCP can be used to modulate NF-kappa-B to treat inflammatory diseases, autoimmune diseases, cancer and viral infections.
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                              E3 ubiquitin ligase, beta-TrCP, F-box, WD protein, I-kappa-B, inhibitor, nuclear factor kappa-B; NF-kappa-B, degradation, modulator; anti-viral; anti-inflammatory; immunosuppressive; cytostatic; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for
                                                                                                                                                                                                                                                                                                                                                                                                      Hatzubai A;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polypeptide enhancing phosphorylated lkappaB ubiquitination useful freating disorder associated with NF-kappaB activation e.g. cancer, comprising amino acid sequence of human E3 ubiquitin ligase or its
                                                                                                                                                                                                                                                                                                                                                                                                      Davis M,
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Human beta-TrCP coding sequence
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.390 AGGCTGGTAGTGAGTGGCTCATCTGACAACACTATCAGATTATGGGACATAGAATGTGGT 1449
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                                                                                                                                                                                                                                                                                                                                              TTGGACCCCCGTGCTCCTGCAGGGACACTCTGTCTACGGACCCTTGTGGAGCATTCCGGA 1629
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                                                           GAATTIGTAAGGACCTTAAATGGACACAAACGAGGCATTGCCTGTTTGCAGGGAC
                                                                                                   ArgLeuValValSerGlySerSerAspAsnThrIleArgLeuTrpAspIleGluCysGly
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                                 GluPheValArgThrLeuAsnGlyHisLysArgGlyIleAlaCysLeuGlnTyrArgAsp
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15-MAR-1999; 99US-0124449.
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ovel nucleic acid for screening compounds useful for treating roliferative and differentiative disorders such as cancer and immune isorders comprises sequences encoding ubiquitin ligases
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ısclosure; Figure 3b, 3c, 3d; 245pp; English.

ingleic acids encoding substrate-targeting subunits of ubiquitin igases with F-box motifs (F-box proteins) are useful for diagnosiss prolificative and differentiated related disorders by measuring 3P gene expression. Cells expressing such proteins or leir fragments are useful for screening compounds. The compounds relative or antagonists, which are useful for treating a rolliferative or differentiative disorder in a mammal such as reast, ovarian and prostate cancer and small cell lung carcinoma ridovascular diseases and inflammatory disorders. PBP protein, allogs, derivatives and their subsequences, anti-FBP antibodies also useful in diagnosis of the disorders.

quence 2151 BP; 628 A; 467 C; 513 G; 543 T; 0 other;

nt Scores: o.: Similarity: cal Similarity: atch:	5.66e-303 3034.00 100.00\$ 100.00\$ 21	Length: Matches: Conservative: Mismatches: Indels: Gaps:	2151 569 0 0 0	
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21 ArgGluAs 130 AGAGAAGA	pCysAsnAsnGlyG] 	ArgGludspCysAsnAsnGlyGluProProArgLys1leIleProGluLysAsnSt 	erLeu 4	10
41 ArgGlnTh 190 AGACAGAC	rTyrasnSerCysa] ATACAACAGCTGTG	gginthrtytasnsercysalaargleucysleuasngingluthrvalcysle 	euala 6 TAGCA 2	50 249
61 SerThrAl 250 AGCACTGC	aMetLysThrGluAs 	snCysValAlaLysThr \TTGTGGGCGAAACA	SetThralametLysThrGluAanCysValAlaLysThrLysLeualaAsnGlyThrSer 8 	309
81 SerMetIl 310 AGTATGAT	eValProLysGlnA: TGTGCCAAGCAACC	rgLysLeuSerAlaSer 	Sermetilevalprolysglnarglysleuseralasertyrglulysglulysgluleu 10	100
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121 IleserGl 430 ATATCCCA	nMetCysHisTyrG 	lnHisGlyHisIleAsn 		140
141 Glnargas 490 CAGAGAGA	pPhelleThrAlaLe \TTICATAACTGCTC	euProAlaArgGlyLeu IGCCAGCTCGGGGATTG	InargaspPheileThralaLeuProalaargGlyLeuAspHisilealaGluAsnile 14	160
161 LeuserTy 550 CTGTCATA	rbeudspalabyss ccrggargccaaar	erLeuCysAlaAlaGlu 	LeuSerTyrLeukspalalysserLeucysalaalagiuLeuValCysLysgiuTrpTyr 1; 	180
, 181 ArgvalTh 610 CGAGTGAC	rSerAspGlyMetLe CTCTGATGGCATGC	euTrpLysLysLeuIle rGTGGAAGAAGCTTATC	ArgvalThrSerAspGlyMetLeuTrpLysLysLeuIleGluArgMetValArgThrAsp 2/ 	200

201 SerLeuTrpArgGlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPheLysAsnLys 220

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rgeting degradation of polypeptide useful for treating cancer and
her proliferative disorders, involves conjugating polypeptide with
1quitin protein ligase or inhibiting ubiquitination using organic
mpound
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The invention relates to methods of altering the polypeptide levels in a cell, using proteins selected from S-phase kinase associated proteins 1 and 2 (SKP1, SKP2). SKP2-like proteins (ZP) and CUL-1 (a member of the cullin, CDC53 family of proteins). The method is useful for altering the level of p27, cyclin E, Max, Mad, c-Myc, MDM2, p53, Bax, Bad or Bcl-2 polypeptide in a cell. SKP2 and SKP2-like protein levels are useful for detecting tumours, and in monitoring tumor treatment in a mammal. Agents that modulate interactions between SKP and target proteins are useful for
                                                                             Modulating polypeptide levels in a cell, diagnosing and treating tumor, involves altering levels of proteins such as S-phase kinase associated proteins 1, 2 and cullin/CDC53 proteins -
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P-PSDB; AAB48298.
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Best Local Similarity:
Query Match:
DB:
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L-1; cullin; CDC53; p27; cyclin E; Max; Mad;
1; Bc1-2; tumour; cytostatic; ds.
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The invention relates to screening compounds useful for the treatment of proliferative or differentiative disorders comprising detecting a change in the activity of SRp2 (F-box protein). The method is useful for screening compounds for the treatment of proliferative or differentiative disorders, particularly cancer. These compounds include small molecules, or compounds or derivatives or analogues of the new ubiquitin ligases. The compounds are useful for treating diseases such as cancer (e.g. breast cancer, prostate cancer or ovarian cancer, lymphoma, small cell lung carcinoma or parathyroid adenomas), major opportunistic infections, immune disorders, certain cardiovascular diseases or inflammatory disorders. This polymolectide sequence represents the oDNA encoding an F-box protein (FBP) of the invention.
                                                                                                                                                                                                                                                                                                                                   Cytostatic; immunomodulator; cardiant; antiinflammatory; antimicrobial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MetAspProAlaGluAlaValbeuGlnGluLysAlabeuLysPheMetAsnSerSerGlu
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                                                                                                                                                                                                                                                                                                                                                          proliferative; differentiative disorder; SNp2; F-box protein; cancer; ubiquitin ligase; breast cancer; prostate cancer; ovarian cancer; small cell lung carcinoma; immune disorder; parathyroid adenoma; FBP; inflammatory disorder; lymphoma; major opportunistic infection; certain cardiovascular disease; human; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Screening compounds for treating proliferative disorders, e.g. breast cancer or prostrate cancer, infections or immune disorders, comprises detecting a change in the activity of Skp2 with either p27 or Cks1
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                                                                                                             AAL41041 standard; cDNA; 2151
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                                                                                                                                                                                                                           .690 ATCCTCATCTGGGACTTCCTAAATGATCGAGCTGCCCAAGCTGAACCCCCCCTT
                             401 LysTyrileValSerAlaSerGlyAspArgThrileLysValTrpAsnThrSerThrCys
                                                                                                                                                                          1330 GAATTTGTAAGGACCTTAAATGGACACAAAGGAGGCATTGCCTGTTTGCAGTACAGGGAC
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                                                                      1270 AAGTACATTGTTTCTGCATCTGGGGATAGAACTATAAAGGTATGGAACACAAGTACTTGT
                                                                                                                               GluPheValArgThrLeuAsnGlyHisLysArgGlyIleAlaCysLeuGlnTyrArgAsp
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                                                                                                                                                                                          AGCACTGCTATGAAGACTGAGAATTGTGTGGCCAAAACAAAACTAGCCAATGGCACTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlnArgAspPhelleThrAlaLeuProAlaArgGlyLeuAspHisIleAlaGluAsnIle
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                                                ArgGlnThrTyrAsnSerCysAlaArgLeuCysLeuAsnGlnGluThrValCysLeuAla
                                                                              SerThrAlaMetLysThrGluAsnCysValAlaLysThrLysLeuAlaAsnGlyThrSer
                                                                                                                                                                                                                                                        SerMet11eValProLysGlnArgLysLeuSerAlaSerTyrGluLysGluLysGluLeu
                                                                                                                                                                                                                                                                                      AGTATGATTGTGCCCCAAGCAAACTCTCAGCAAGCTATGAAAAGGAAAAGGAAACTG
                                                                                                                                                                                                                                                                                                                                                          CysVallysTyrPheGluGlnTrpSerGluSerAspGlnValGluPheValGluHisLeu
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laim 2; Page -; 125pp; English.

he invention relates to a complex of protein-protein interactions forming a protein-protein interaction map, PIM) in adipocyte cells as sinced in the specification, or polynucleotides in adipocyte cells are the polypeptides. Also included are a recombinant cell expressing the teracting polypeptides and a method of selecting a modulating compound adium containing a modulating a recombinant host cell on a selective tyression of which is toxic for the recombinant host cell which is ansformed with two vectors, where the first vector comprises a largeformed with two vectors, where the first vector comprises a month and atthe second vector comprising a polynucleotide encoding a scond hybrid polypeptide and arctivating domain that activates the second hybrid polypeptide and arctivating domain that activates the second hybrid polypeptide and arctivating domain that activates the second hybrid polypeptide and arctivating domain that activates the recombinant host cell (i.e. using the yeast two-hybrid compounds that modulate the protein-protein interactions and useful for treating obesity and tabolic discorders e.g. non-insulin dependent diabetes mellitus, fowning observed in the present sequence encodes a member of the protein of the present sequence encodes a member of the protein manners. SiD. The present sequence encodes a member of the protein manners. brid assay.

xte: The present sequence was not displayed in the specification but s obtained from its Genbank entry by the indexer.

quence 2151 BP; 628 A; 467 C; 513 G; 543 T; 0 other,

2151 569 0 0 0 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps: 5.66e-303 3034.00 100.00% 100.00% Similarity: cal Similarity: atch: nt Scores:

01-168B-2 (1-569) x ABS51009 (1-2151)

SS es	161	161 LeuSerTyrLeuAspAlaLysSerLeuCysAlaAlaGluLeuValCysLysGluTrpTyr 180
රු සි	181	ArgValThrSerAspGlyMetLeuTrpLysLysLeuIleGluArgMetValArgThrAsp 200
· 6 1	201	SerbeuTrpArgGlybeuAlaGluArgArgGlyTrpGlyGlnTyrbeuPhebysAsnLys 220
3 3	221	Proprodsp61ydsnAlaProprodsnSerPheTyrArgAlaLeuTyrProlys11e11e 240
qq	730	CCTCCTGACGGGAATGCTCCTCCCAACTCTTTTATAGAGGACTTTTATCCTAAAATTATA 789
δŏ 1	241	GlnAspileGluThrileGluSerAsnTrpArgCysGlyArgHisSerLeuGlnArgIle 260
a :	06/	CAAGACATTGAGACAATAGAATTGTAATTGGGAGAGCAGACATAGTTTACAGAATT 849
p ck	261	HISCYSATGGERGIUINISSETUSGLIVAAITYTCHEUGLINIYAASSPGINLYSIIE 280 CACIGCCGAAGTGAAACAAGGAGTTTACTGTTTACAGTATGATGATCAGAAATA 909
\(\frac{1}{2} \)	281	ValSerGlyLeuArgAspAsnThrIleLysIleTrpAspLysAsnThrLeuGluCysLys 300
}	301	ArglleLeufhrGlvHisThrGlvSerValLeuCvsLeuGlnTvrAspGluArgVallle 320
. qa	970	
ò	321	IleThrGlySerSerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeu 340
DP	1030	ATAACAGGATCATCGGATTCCACGGTCGGAGTGTGGGATGTAAATACAGGTGAAATGCTA 1089
8 1	341	AsnThrLeuIleHisHisCysGluAlavalLeuHisLeuArgPheAsnAsnGlyMetMet 360
ධ්ර	1090	AACACGTTGATTCACCATTGTGAAGCAGTTCTGCACTTGCGTTTCAATAATGGCATGATG 1149
6 8 장	361	ValThrCysSerLysAspArgSerIleAlaValTrpAspMetAlaSerProThrAspIle 380
ò	381	
qq	1210	ACCTCCGGAGGGTGGTGGGACACCGAGCTGCTGTCATGTTGTAGACTTTGATGAC 1269
λŏ	401	
op Q	1270	aagtacattgtttctgcatctgggatagaactataaaaggtatggaacacaagtacttgt 1329
\$ \frac{1}{2}	421	
} &	441	ArgleuValValSerGlySerSerAspAsnThrlleArgleuTrpAspIleGluCysGly 460
Db	1390	AGGCTGGTAGTGAGTGGCTCATCTGACACACACTATCAGATTATGGGACATAGAATGTGGGT 1449
δ	461	AlacysteuArgvalLeuGluGlyHisGluGluLeuValArgCysIleArgPheAspAsn 480
Db	1450	GCATGTTTACGAGTGTTAGAAGGCCATGAGGAATTGGTGCGTTGTATTCGATTGGTAAC 1509
δ	481	LyskrgileValSerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAla 500
Dp Dp	1510	AAGAGATAGTCAGTGGGGCCTATGATGGAAATTAAAGTGTGGGATCTTGTGGCTGCT 1569
ે ં	501	
Q O	1570	TTGGACCCCCGTGCTCCTGCAGGGACACTCTGTCTACGGACCCTTGTGGAGGATTCCGGA 1629
ò	521	ArgValPheArgLeuGlnPheAspGluPheGlnIleValSerSerHisAspAspThr 540

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249

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309 100 369 120 429 140 489

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1030 ATAACAGGATCATGGGATTCCACGGTCAGAGTGTGGGATGTAAATACAGGTGAAATGCTA 1089
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                                                                                                                                           ATGGACCCGGCCCGGCCGCTGCTGCAGAGAGCACTCAAGTTATGAATTCCTCAGAG
                                                                                                                                                                                     ArgGluAspCysAsnAsnGlyGluProProArgLys1le1leProGluLysAsnSerLeu
                                                                                                                                                                                                               130 AGAGAAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATAACCAGAGAATTCACTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       370 IGIGICAAATACTITIGAGCAGTCAGAGTCAGATCAAGTGGAATTIGTGGAACATCTT
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                                                                                                                 MetAspProAlaGluAlaValLeuGlnGluLysAlaLeuLysPheMetAsnSerSerGlu
                                                                                                                                                                                                                                                                                                                               SerThrAlaMetLysThrGluAsnCysValAlaLysThrLysLeuAlaAsnGlyThrSer
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         000
         Mismatches:
Indels:
                                           Gaps:
                                                                               (1-2419)
                                                                           US-09-601-168B-2 (1-569) x AAZ29233
       100.00%
     Local Similarity:
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| IleLeulleTrpAspPheLeuAspAspFroAlaAlaGlnAlaGluProProArgSerPro
                                                                         ciosclerosis, cirrhosis, cancer, hepatitis and inflamma
like AIDS, Addison's disease, multiple sclerosis, etc.
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/*tag= a /*tag= //product= "Cell Signalling Protein-12"
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Yang J;
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expressed in the bone marrow. The polymuclectide and the polypeptide encoded by it are useful in the treatment of various immune deficiencies and disorders. The deficiencies and disorders may be genetic, may be caused by a viral (e.g. HIV), bacterial or fungal infection, or may result from an autoimmune disorder, a coagulation disorder (e.g. haemophilia), inhibition of tumour cell proliferation, suppression of an inflammatory response or treatment of a nervous system disorder such as Alzheimer's disease. Detection of the presence or increased expression of the polymucleotide or the procein it encodes is useful for the diagnosis and/or prognosis of one or more types of cancer. The polymucleotide and polypeptide can be used as nutritional sources or supplements and in the screening of chemical compounds as potential drugs.
                                                                                                                                                                                                                                                                                                                                                           Novel bone-marrow-expressed polynucleotides and polypeptides, useful for treating e.g. cancer and immune deficiency disorders -
                                                                                                                                                                                                                                                                                                                                                                                                                                                              present sequence is one of 251 novel human polynucleotides
                                                                                                                                                                                                                      Tang YT, Liu C, Asundi V, Chen R, Mhman T, Xu C, Xue AJ, Yang Y, Zhang
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                                                                                                ValThrCysSerLysAspArgSerIleAlaValTrpAspMetAlaSerProThrAsp11e
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                       AsnThrLeuIleHisHisCysGluAlaValLeuHisLeuArgPheAsnAsnGlyMetMet
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                                                                                                                                                                                                                      <u> ACCCTCCGGAGGGTGCTGGACACCGAGCTGCTGTCAATGTTGTAGACTTTGATGAC</u>
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Sequence 3220 BP; 878 A; 725 C; 770 G; 847 T; 0 other
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DEC-2000; 2000WO-US34960.

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JUL-2001.

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The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell prollferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, hematopolesis regulating
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vaccine, peptide cherapy, stem cell growth factor, haematopolesis,
tissue growth factor; immunomodulatory, cancer, leavemia,
nervous system disorder; arthritis; inflammation; ss.
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LysArgileValSerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAla
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Wang D, Wang J, Zhang J, Ren F, Chen R,
Yang Y, Wejhrman T, Goodrich R;
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27-APR-2000; 2000US-0566875.
20-UUN-2000; 2000US-0598075.
19-JUL-2000; 2000US-0620325.
01-SEP-2000; 2000US-0654936.
15-SEP-2000; 2000US-065561.
20-OCT-2000; 2000US-063325.
30-NOV-2000; 2000US-053325.
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tivity, tissue growth factor activity, immunomodulatory activity and tivin/inhibin activity and may be useful in the diagnosis and/or eatment of cancer, leukaemia, nervous system disorders, arthritis and "flammation.
                                                                The: Records for SEQ ID NO 2110 (AAKS2581), 2111 (AAK52582) and 3666 (AM80020) are omitted as the relevant pages from the seguence listing are missing at the time of publication.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGACCCGGCCGAGGCGGTGCTGCAAGAGAAGGCACTCAAGTTTATGTGCCTCTATGCCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGGCATGCTGTGGAAGAAGCTTATCGAGAGAATGGTCAGGACAGATTCTCTGTGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                              187 AGGICTCTGTGGCTGGCTGCTCCAGCCTGGCGGACAGCATGCCTTCGCTGCGATGCCTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheGluGlnTrpSerGluSerAspGlnValGluPheValGluHisLeuIleSerGlnMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CysHisTyrGlnHisGlyHisIleAsnSerTyrLeuLysProMetLeuGlnArgAspPhe
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Conservative:
Mismatches:
Indels:
Gaps:
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DÞ	907	AATGCTCCTCCCAACTCTTTTATAGAGCACTTTATCCTAAAATTATACAAGACATTGAG 966
ò	245	ThrileGluSerAsnTrpArgCysGlyArgHisSerLeuGlnArglleHisCysArgSer 264
DP	2967	ACAATAGAATCTAATTGGAGATGTGGAAGACATAGTTTACAGAGAATCCACTGCCGAAGT 1026
δλ	265	GluThrSerlysGlyValTyrCysLeuGlnTyrAspAspGlnLysIleValSerGlyLeu 284
QQ Q	1027	GAAACAAGCAAAGGAGTTTACTGTTTACAGTATGATCAGAAAATAGTAAGGGGCCTT
δλ	285	ArgAspAsnThrIleLysIleTrpAspLysAsnThrLeuGluCysLysArgIleLeuThr 304
DÞ	1087	cgagacaacacaatcaagatctgggataaaaacacattggaatgcaagcgaattctcaca
δλ	305	GlyHisThrGlySerValLeuCysLeuGlnTyrAspGluArgValIleIleThrGlySer 324
Q	1147	GGCCATACAGGTTCAGTCCTCTCTCCAGTATGATGAGAGAGTGATCATAACAGGATCA
ò	325	SerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeuAsnThrLeuIle
QQ	1207	TCGGATTCCACGGTCAGAGTGTGGGATGTAATACAGGTGAATGCTAAACACGTTGATT
δλ	345	HisHisCysGluAlaValLeuHisLeuArgPheAsnAsnGlyMetMetValThrCysSer 364
qq	1267	CACCATTGTGAAGCAGTTCTGCACTTGCGTTTCAATAATGGCATGATGGTGACCTGCTCC
ζ	365	LysaspargSerlleAlaValTrpAspMetAlaSerProThrAspIleThrLeuArgArg 384
qu	1327	aaagatcgttccattgctgtatgggatatggcctccccaactgacattaccctccggagg
δy	385	ValLeuvalGlyHisArgAlaAlaValAsnValValAspPheAspAspLysTyrIleVal
DP	1387	GTGCTGGTCGGACACCGAGCTGCTGTCATGTTGTAGACTTTGATGACATACAT
ζζ	405	SerAlaSerGlyAspArgThrIleLysValTrpAsnThrSerThrCysGluPheValArg
ρþ	1447	TCTGCATCTGGGGGTAGAACTATAAAGGTATGGAACACAAGTACTTGTGAATTTGTAAGG
à	425	ThrieuasnglyHisLysArgGlyIleAlaCysLeuGlnTyrArgAspArgLeuValVal
Db	1507	ACCTTAAATGGACACAAACGAGGCATTGCCTGTTTGCAGTACAGGACAGGCTGGTAGTG
ò	445	SerGlySerSerAspAsnThrlleArgLeuTrpAsplleGluCysGlyAlaCysLeuArg
qq	1567	AGTGGCTCATCTGACAACACTATCAGATTATGGGACATAGAATGTGGTGCATGTTTACGA
Qy	465	ValLeuGluGlyHisGluGluLeuValArgCysIleArgPheAspAsnLysArglleVal
дg	1627	GTGTTAGAAGGCATGAGGAATTGGTGCGTTGTATTCGATAACAAGAGGATAGTC
ò	485	SerGlyAlaTyrAspGlyLys1leLysValTrpAspLeuValAlaAlaLeuAspProArg
DÞ	1687	Adiogodectardardaaaaarraaadigroodarerridroocrecritrooaeeeeer
Qy	505	AlaProAlaGlyThrLeuCysLeuArgThrLeuValGluHisSerGlyArgValPheArg
QQ	1747	GCTCCTGCAGGGACACTCTGTCTACGGACCCTTGTGGAGCATTCCGGAAGAGTTTTCGA
٥'n	525	LeuGlnPheAspGluPheGlnIleValSerSerHisAspAspThrIleLeuIleTrp
qđ	1807	CTACAGTTTGATGAATTCCAGATTGTCAGATAGTTCACATGATGATGACACAATCCTCATCTGG
δý	545	AspPheLeuAsnAspProAlaAlaGluAlaGluProProArgSerProSerArgThrTyr
qq	1867	GACTTCCTAAATGATCCAGCTGCCCAAGCTGAACCCCCCCTTCCCTTCTCGAACATAC
δλ	565	ThrTyr1leSerArg 569
qq	1927	ACCIACATCICCAGA 1941
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120 360 160 480 180 540 009

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441 ArgLeuValValSerGlySerSerAspAsnThrIleArgLeuTrpAspIleGluCysGly 460
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                               GlnArgAspPhelleThrAlaLeuProAlaArgGlyLeuAspHisIleAlaGluAsnIle
                                                                                                                                                                                                                                                     421 CAGAGGGATTTCATAACTGCACCAGCAGCAGGGGTCTGGACCACCATT
                                                                                                                                                                                                                                                                                                                                 CTGTCATACTTGGACGCCAAGTCACTGTGTGCTGCTGAGCTCGTGTGCAAGGAATGGTAC
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                                                                             CysValLysTyrPheGluGlnTrpSerGluSerAspGlnValGluPheValGluHisLeu
                                                                                                             301 TGTGTCAAGTATTTTGAGCAGTGGTCAGAGTCTGATCAAGTGGAATTTGTAGAACACTT
                                                                                                                                                     IleSerGlnMetCysHisTyrGlnHisGlyHisIleAsnSerTyrLeuLysProMetLeu
                                                                                                                                                                                         361 ATATCCCAAATGTGTCACTACCAGCATGGGCACATCAACTCCTACTAAAACCTATGCTG
                                                                                                                                                                                                                                                                                                           LeuSerTyrLeuAspAlaLysSerLeuCysAlaAlaGluLeuValCysLysGluTrpTyr
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661 CCTCCTGATGAGAACGCTCCTCCCAACTCCTTTTATAGAGCGCTTTATCCTAAAATCATA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e present invention describes an F-box motif protein of ubiquitin gase SCF complex which promotes the ubiquitination of IkappaB or ta-catenin and is constituted by Skpl protein, cull protein and a mplex (SCF complex) of F-box protein containing F-box motif and WD40 peat motif and has the amino acid sequence of 45 residues (AAB12811) one of two S69 residue sequences (AAB12812, which is mouse ubiquitin gase FWD1 protein) and (AAB12813, which is human beta-transducin peat containing protein (beta-TrCP)). The F-box protein can be used for e game therapy of colon cancer by being recombined to a virus vector. on the present invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MetAspProAlaGluAlaValLeuGlnGluLysAlaLeuLysPheMetAsnSerSerGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ATGGACCCGGCAGAGGCGGTGCTGCAGGAGAAGCGCTTAAGTTTATGAATTCCTCAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgGluAspCysAsnAsnGlyGluProProArgLys1leIleProGluLysAsnSerLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 AGAGAAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATACCAGAGAAGAATAACTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 AGACAGACTTACAACAGCTGTGCCAGGCTTTGCATAAACCAAGAGACAGTATGTCTAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     which promotes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             quence 1707 BP; 467 A; 399 C; 453 G; 388 T; 0 other;
                                                                                                             use ubiquitin ligase FWD1 protein encoding cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   box protein of ubiquitin ligase SCF complex iquitination of IkappaB or beta-catenin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-168B-2 (1-569) x AAA73131 (1-1707)
                                                                                                                                                                                                                                                                                                                                                                                                                                       AGA-) KAGAKU GIJUTSU SHINKO JIGYODAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sclosure; Fig 16; 19pp; Japanese.
1707
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2997.00
99.12%
98.59%
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                                                                           (first entry)
 A73131 standard; cDNA;
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PSDB; AAB12812.
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us-09-601-168b-2.rng

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Percent Similarity:
Best Local Similarity:
Query Match:
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                                                                                                                                                                                                                                                                              AAAAGGATGTGGGGGGGCCTATGATGGAAAATTAAAGTGTGGGGATCTTATGGCTGCT
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                                                                                                                                                                       TTGGACCCGCGTGCTCCAGCAGCACTCTCTGTCTGCGGACACTTGTGGAGCATTCTGGA
                                                                                                                                                                                                       ArgValPheArgLeuGlnPheAspGluPheGlnIleValSerSerSerHisAspAspThr
                                                                                                                                                                                                                                                          IleLeuIleTrpAspPheLeuAspAspProAlaAlaGlnAlaGluProProArgSerPro
                                         AlaCysLeuArgValLeuGluGlyHisGluGluLeuValArgCysIleArgPheAspAsn
                                                                                                LysArgileValSerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAla
geting degradation of polypeptide useful for treating cancer and er proliferative disorders, involves conjugating polypeptide with quitin protein ligase or inhibiting ubiquitination using organic pound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lquitin ligase, SCF, F-box protein, targeted degradation,
stabilisation; proteolysis; drug discovery; gene therapy; cancer;
coprotein; Huntington's disease; gene knockout; delivery systems;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= a
/product= F-box protein FWDlp
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polypeptide in vivo. Targetted degradation is achieved by expressing the ubiquitin ligase in a cell linked to the interaction domain of the target polypeptide and thereby recruiting the target polypeptide to the ubiquitin ligase. Such methods are useful for decreasing or increasing the level of a target polypeptide and for creating and expressing a destabilized polypeptide which is subjected to SCF mediated proteining and desired protein in a cell is useful for preventing or treating diseases caused by the presence of abnormal amount of the specific polypeptides, for drug discovery and for gene therapy. Diseases treated include cancer, by degradation of concoproteins, Huntington's disease, other proliferative disorders and microbial infections. The method provides a quick and easy alternative to gene knockout technology. The target polypeptide can be degraded at all stages, or a specific stage, of development in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           450
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         91 ATGGACCCGGCAGAGGCGGTGCTGCAGGAGAAAGCGCTTAAGTTTATGAATTCCTCAGAG 150
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2175 BP; 589 A; 528 C; 567 G; 491 T; 0 other;
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F-box proteins are a family of ubiquitin ligases (SCF ubiquitin ases) which can be used for the targetted degradation of a target

im 10; Page 184; 185pp; English

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US-09-601-168B-2 (1-569) x AAH89966
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                                                                                                                         Human, bone marrow, antiinflammatory, cytostatic, neuroprotective, antiviral; antibacterial; antifungal, anti-HIV, haemostatic, immunosuppressive, gene therapy, cytokine cell proliferation; cell differentiation modulator; immune disorder; infection; cancer, human immunodeficiency virus; HIV; autoimmune disorder; haemophilia;
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Y, Zhang
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25-APR-2000, 2000US-0552317.
09-JUL-2000, 2000US-0598042.
19-JUL-2000, 2000US-0620312.
                                                                                              Human bone marrow cDNA, SEQ
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e: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 MM8020) are omitted as the relevant pages from the sequence listing
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JUN-2000; 2000US-0560875.

JUL-2000; 2000US-0590075.

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                             TGTTTAGCAAGCACTGCTATGAAGACTGGAAATTGTGTGGCCAAAACAAAACTTGCCAAT
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CysLeuAlaSerThrAlaMetLysThrGluAsnCysValAlaLysThrLysLeuAlaAsn
                                                                                                                                                              547 GECACTTCCAGTATGATTGTGCCCAAGCAACGGAAACTCTCAGCAAGCTATGAAAAGGAA
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                                                                                                            GlyThrSerSerMetIleValProLysGlnArgLysLeuSerAlaSerTyrGluLysGlu
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478 PheaspasnLysargileValSerGlyalaTyraspGlyLysileLysValTrpaspLeu 497
1807 GIGGCIGCITIGGACCCCCGIGCTCCTCCAGGGACACTCTGTCTACGGACCCTTGTGGAG 1866
                                                                                                                                                       498 ValAlaAlaLeuAspProArgAlaProAlaGlyThrLeuCysLeuArgThrLeuValGlu 517
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FEATURE:
NAMB(KEY: gene
LOCATION: (1)..(1710)

LOCHER INFORMATION: Human beta-TrCP1 : F-box containing protein with 7 WD40 repeats;
OTHER INFORMATION: Part of SCF (Skp1/Cullin/F-box) complex E3 ubiquitin ligase; Impl
OTHER INFORMATION: icated in the degradation of b-catenin and IkBa
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Sequence 35, Appl
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Sequence 2934, Ap
Sequence 190, App
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Sequence 18709, A
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Seguence 11, Appl
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Sequence 20, Appl
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Sequence 7, Application US/10038010

Sequence 7, Application US/10038010

Sequence 7, Application NS/20030040089A1

SEPLICANT: HYBRIGENICS

APPLICANT: HYBRIGENICS

APPLICANT: Pierre, Legrain

TITLE OF INTERNET PATCHOLO-Protein interactions in adipocyte cells

FILE REPERBNCE: B4767A

CURRENT APPLICATION NUMBER: US/10/038,010

CURRENT FILING DATE: 2002-07-23

PRIOR APPLICATION NUMBER: US 60/259,377

PRIOR FILING DATE: 2002-07-3

SEQ ID NO 7

LENGTH: 1710
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Sequence 26, 7
Sequence 26, 7
Sequence 24, 7
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1.UGPFTO spool p/USO801168/runat 22102003 100548 17891/app_query.fasta_1.711

1.LGPFTO spool p/USO80601168/runat 22102003 100548 17891/app_query.fasta_1.711

Ished Applications NA -QFMT=fastap -SUPFTX=rnpb -MINMATCH=0.1

0.LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=biosum62

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1.0OPEXT=0 -UNITS=0 -MINMAP - LARGEQUERY - NG SCORES=0 -WAT - DSPBLOCK=100

1.0OPEXT=0 -WARN TIMBOUT=30 -THRRADS=1 -XGAPDEXT=0.5

1.0OPEXT=1 -YGAPDP=10 -YGAPDXT=0.5 -DELENT=7
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core greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/2/pubpna/USO7_PUBCOMB.seq:*
2: /cgn2_6/ptodata/2/pubpna/PCT_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/USO6_NEW_PUB.seq:*
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                                    GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd
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Listing first 45 summaries
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
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| Sequence 17, Application US/09832161
| Publication No. US20330166587A1
| GENERAL INFORMATION:
| APPLICANT Manning, Anthony M. |
| APPLICANT: Maning, Anthony M. |
| APPLICANT: Mait, Sharon |
| APPLICANT: Ben-Neriah, Yinon |
| APPLICANT: Ben-Neriah, Yinon |
| APPLICANT: Hatzubai, Ada |
| APPLICANT: Hatzubai, Ada |
| APPLICANT: Lavon, Iris |
| APPLICANT: Lavon, Iris |
| APPLICANT: Aron, Ariaham |
| TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING ACTIVATION OF |
| TITLE OF INVENTION: WF-kB |
| FILE REFERENCE: 860098.427 |
| CURRENT APPLICATION NUMBER: US/09/832,161 |
| CURRENT FILING DATE: 2001-04-09
GAATTTGPAAGGACCTTAAATGGACACAAACGAGGCATTGCCTGTTTGCAGTACAGGGAC
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Sequence 1, Application US/10042417

Publication No. US20020123082A1

GENERAL INFORMATION

TITLE OF INVENTION: METHODS TO IDENTIFY COMPOUNDS USEFUL FOR THE TREATMENT OF TITLE OF INVENTION: METHODS TO IDENTIFY COMPOUNDS USEFUL FOR THE TREATMENT OF FILE REPREBICE: 5914-090-999

CURRENT APPLICATION NUMBER: US/10/042,417
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APPLICATION NUMBER: 09/210,060
             FILING DATE: 1998-12-10
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Publication No. US20030166587A1
GENERAL INFORMATION:
APPLICANT: Manning, Anthony M.
APPLICANT: Marcurio, Frank
APPLICANT: Marcurio, Frank
APPLICANT: Amic, Sharon
APPLICANT: Ben.Neriah, Yinon
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NT FILING DATE: 2002-01-07
APPLICATION NUMBER: 60/260,179
FILING DATE: 2001-01-5
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APPLICANT: Hatzubai, Ada
APPLICANT: Lavon, Iris
APPLICANT: Lavon, Iris
APPLICANT: Lavon, Iris
APPLICANT: Lavon, Avzaham
TITLE OF INVENTION: OFF-COMPOUNDS AND METHODS FOR MODULATING ACTIVATION OF
TITLE OF INVENTION: NF-kB
FILE REPERENCE: 8600988.427
CURRENT APPLICATION NUMBER: US/09/832,161
CURRENT APPLICATION NUMBER: 09/210,060
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PRIOR APPLICATION NUMBER: 09/210,060
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Sequence 15, Application US/09764848

Setent No. US2002077270A1

GENERAL INFORMATION:

TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies

FILE REPRENCE: PT208

CURRENT APPLICATION NUMBER: US/09/764,848

CURRENT FILING DATE: 2001-01-17

Prior application data removed - consult PALM or file wrapper

NUMBER OF SEQ ID NOS: 53

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 15
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LOCATION: (883)
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R APPLICATION NUMBER: 60/226,868 R FILING DATE: 2000-09-29
R APPLICATION NUMBER: 60/241,785
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R PELICATION NUMBER: 60/244,617
R FILING DATE: 2000-11-01
R APPLICATION NUMBER: 60/225,268 R FILING DATE: 2000-09-29
R APPLICATION NUMBER: 60/251,856
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APPLICATION NUMBER: 60/229,509 FILING DATE: 2000-09-29 APPLICATION NUMBER: 60/224,519 FILING DATE: 2000-10-20 APPLICATION NUMBER: 60/249,299 FILING DATE: 2000-11-17 FILING DATE: 2000-09-01
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APPLICATION NUMBER: 60/229,343 FILING DATE: 2000-07-07
APPLICATION NUMBER: 60/225,270 APPLICATION NUMBER: 60/224,518 FILING DATE: 2000-08-14 APPLICATION NUMBER: 60/241,809 FILING DATE: 2000-10-20 FILING DATE: 2000-08-14 APPLICATION NUMBER: 60/236,368 FILING DATE: 2000-09-01 APPLICATION NUMBER: 60/229,345 APPLICATION NUMBER: 60/236,367 FILING DATE: 2000-09-29 APPLICATION NUMBER: 60/237,039 APPLICATION NUMBER: 60/225,447 APPLICATION NUMBER: 60/216,880 APPLICATION NUMBER: 60/251,869 FILING DATE: 2000-12-08 APPLICATION NUMBER: 60/235,834 APPLICATION NUMBER: 60/234,274 FILING DATE: 2000-09-21 APPLICATION NUMBER: 60/234,223 FILING DATE: 2000-09-21 APPLICATION NUMBER: 60/228,924 APPLICATION NUMBER: 60/236,369 APPLICATION NUMBER: 60/220,964 FILING DATE: 2000-07-26 APPLICATION NUMBER: 60/236,327 FILING DATE: 2000-09-01 APPLICATION NUMBER: 60/229,287 FILING DATE: 2000-09-01 APPLICATION NUMBER: 60/229,513 APPLICATION NUMBER: 60/231,413 FILING DATE: 2000-08-14 2000-08-30 2000-09-05 FILING DATE: 2000-08-14 2000-08-22 2000-09-01 2000-07-13 FILING DATE: 2000-09-FILING DATE: FILING DATE: FILING DATE:

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R APPLICATION NUMBER: 60/231,414
R FILING DATE: 2000-09-08

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15 PheMetAsinSerSerGluArgGluAspCysAsinAsnGlyGluProProArgLysIlelle 34 35 ProGluLysAsnSerLeuArgGlnThrTyrAsnSerCysAlaArgLeuCysLeuAsnGln GluPheValGluHisLeuIleSerGlnMetCysHisTyrGlnHisGlyHisIleAsnSer 75 LeuAlaAsnGlyThrSerSerMetileValProLysGlnArgLysLeuSerAlaSerTyr GluiysGluiysGluieuCysValiysTyrPheGluGlnTrpSerGluSerAspGlnVal GluThrValCysLeuAlaSerThrAlaMetLysThrGluAsnCysValAlaLysThrLys 127 TTCCAGAACACTTCAGTTATGGAAGATCAAAATGAAGATGAGGTCCCCAAAG 951 226 238 37 37 37 Length:
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Conservative:
Mismatches:
Indels:
Gaps: US-09-601-168B-2 (1-569) x US-10-222-020-15 (1-951) 4.47e~136 1155.50 76.97% 68.48% 38.09% Percent Similarity: Best Local Similarity: Query Match: DB: Alignment Scores: 55 128 0 9 188 115 Pred. No.: ò 요 ò g δ d ò qq $\dot{\delta}$ 셤 ò

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                                                                 ArgMetValArgThrAspSerLeuTrpArgGlyLeuAlaGluArgArgGlyTrpGlyGln
                                                                                   TyrLeuPheLysAsnLysProProAspGlyAsnAlaProProAsnSerPheTyrArgAla
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                               GTATGTAAAGAATGGCAGCGAGTGATCTCAGAAGGAATGCTTTGGAAGAAGCTGATTGAA
                                                                                                                                                         TACCTGTTTAAAACAGACCCACAGATGGC-----CCTCCAAATTCATTTATAGGTCA
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CURRENT APPLICATION NUMBER: US/10/116,016

CURRENT FILING DATE: 2002-04-05

Prior Application removed - See File Wrapper or NUMBER OF SEQ ID NOS: 53

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 15
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NAME/KEY: misc_feature
LOCATION: (883)
O'THER INFORMATION: n equals a,t,g, or
NAME/KEY: misc_feature
LOCATION: (913)
O'THER INFORMATION: n equals a,t,g, or
NAME/KEY: misc_feature
LOCATION: (931)
O'THER INFORMATION: n equals a,t,g, or
NAME/KEY: misc_feature
LOCATION: (935)
O'THER INFORMATION: n equals a,t,g, or
NAME/KEY: misc_feature
LOCATION: (935)
LOCATION: (941)
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S-10-116-016-15
Sequence 15, Application US/10116016
Publication No. US20030054379Al
GENERAL INFORMATION:
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ORGANISM: Homo sapiens
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APPLICANT: Gurney, Mark E.
APPLICANT: Li, Jinhe
APPLICANT: Li, Jinhe
APPLICANT: Li, Jinhe
APPLICANT: Pauley, Adele M.
APPLICANT: Pauley, Adele M.
APPLICANT: Pauley, Adele M.
TITLE OF INVENTION: Broade Them
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CURRENT FILING DATE: 1998-12-17
NUMBER OF SEQ ID NOS: 27
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 20
LENGTH: 1881
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Matches:
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Mismatches:
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90.12%
86.42%
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Best Local Similarity:
Query Match:
DB:
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S-09-864-7784, Application US/09864761
GEREEAL INFORMATION BARIA SARIAN G.
APPLICANT, Perm, Sharran G.
APPLICANT, Perm, Sharran G.
APPLICANT, Perm, Sharran G.
APPLICANT, Perm, Sharran G.
APPLICANT, Perm, Sharran G.
APPLICANT, Perm, Sharran G.
APPLICANT, Perm, Sharran G.
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APPLICANT, Perm, Sharran G.
TITLE OF INVESTION: HINAME CENTRESSION ANALYSIS BY MICHARAY
FILE OF INVESTION: HINAME CENTRESSION ANALYSIS BY MICHARAY
FILE OF INVESTION: GENE EXPRESSION ANALYSIS BY MICHARAY
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FILE OF INVESTION ANDERS: US 60/201-456
FRIOR FILING DATE: 2000-00-23
FRIOR FILING DATE: 2000-00-23
FRIOR FILING DATE: 2000-00-32
FRIOR FILING DATE: 2000-00-32
FRIOR PAPELICANTION WINDERS: US 60/204-66
FRIOR APPLICANTION WINDERS: US 60/204-66
FRIOR APPLICANTION WINDERS: US 60/204-68
FRIOR APPLICANTION WINDERS: US 700-01-30
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ORGANISM: Homo sapiens
FRATURE:
OTHER INFORMATION: EXPRESSED IN HELLOO, SIGNAL = 3.4
OTHER INFORMATION: EXPRESSED IN HELLOO, SIGNAL = 3.4
OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 2.6
OTHER INFORMATION: EXPRESSED IN BY44, SIGNAL = 2.6
OTHER INFORMATION: EXPRESSED IN BY47, SIGNAL = 2.8
OTHER INFORMATION: EXPRESSED IN BLACKING, SIGNAL = 0.75
OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 1.6
OTHER INFORMATION: EXPRESSED IN BEARIN, SIGNAL = 1.9
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OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 4.3
OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 1.7
IS-09-864-761-2778
                           900 ACACCGGTGAAGNTCTTAACACATTGATC 929
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	GENERAL INPORMATION: GENERAL INPORMATION: APPLICANT: Gurney, Mark E. APPLICANT: Li, Jinhe APPLICANT: Bulley, Adele M. APPLICANT: Pharmacia & Upjohn Company TITLE OF INVENTION: Human Sel-10 Folypeptides and Polynucleotides that TITLE OF INVENTION: Bncode Them FILE REFRENCE: 6142 CURRENT APPLICATION NUMBER: US/09/328,877A CURRENT FILING DATE: 1999-06-09 NUMBER OF SEQ ID NOS: 27 SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 20 LENGTH: 1881 TYPE: DNA ORGANISM: Artificial Sequence PEATURE: PEATURE: OTHER INFORMATION: Description of Artificial Sequence: 6 myc tagged
core: " Milarity: 644.50	928 ProAsnSerPheTyrArgAlaLeuTyrProLysIleIleGlnAspIleGluThrIleGlu 247

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ACACTCAAAGTGTGGAATGCAGAGACTGGAGAATGTATACACACCTTATATGGGCATACT 1140
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APPLICANT: Strohmaier, Heimo
APPLICANT: Strohmaier, Heimo
APPLICANT: Spruck, Charles
APPLICANT: Spruck, Charles
TITLE OF INVENTION: HCDC4 MODULATES CYCLIN E DEGRADATION
FILE REPERBRUCE: TSN 179.2
CURRENT APPLICATION NUMBER: US/10/245,618
CURRENT FILING DATE: 2002-09.16
PRIOR FILING DATE: 2002-09.16
PRIOR FILING DATE: 2002-08-15
PRIOR FILING DATE: 2002-08-15
PRIOR FILING DATE: 2001-09-14
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Publication No. US20030143582A1
GENERAL INFORMATION:
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OTHER INFORMATION: homo sapiens
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   AsnThrlleLys1leTrpAspLysAsnThrLeuGluCysLysArglleLeuThrGlyHis
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PUblication No. US20030143582A1
GENERAL INFORMATION:
APPLICANT: Strohmaier, Heimo
APPLICANT: Strohmaier, Heimo
APPLICANT: Strohmaier, Heimo
APPLICANT: Strohmaier, Holo
APPLICANT: Strohmaier, Holo
TITLE OF INVENTION: HCDC4 MODULATES CYCLIN E DEGRADATION
FILE REPERENCE: TSRI 779.2
CURRENT FILING DATE: 2002-09-16
CURRENT FILING DATE: 2002-09-16
PRIOR APPLICATION NUMBER: US 60/404,116
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NUMBER, OF SEQ ID NOS: 48
SCPTWARE: RastSEQ for Windows Version 4.0
SEQ ID NO 13
LENGTH: 1620
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APPLICANT: Strohmaier, Heimo
APPLICANT: Spruck, Charles
APPLICANT: Sangfelt, Olle
TITLE OF INVENTON: HCDC4 MODULATES CYCLIN E DEGRADATION
FILE REFERENCE: TSRI 779.2
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PRIOR FILING DATE: 2002-08-15
PRIOR APPLICATION NUMBER: US 60/322,947
PRIOR FILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 48
SOFWRARE: FastSEQ for Windows Version 4.0
SEQ ID NO 7
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OTHER INFORMATION: Synthesized
JS-10-245-618-7
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ORGANISM: Artificial Sequence
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Sequence 5, Application US/10245618

Publication No. US20030143582A1

GENERAL INFORMATION:

APPLICANT: Reed, Steven

APPLICANT: Strohmaier, Heimo
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Matches:
              CURRENT FILING DATE: 2002-09-16
PRIOR APPLICATION NUMBER: US 60/404,116
PRIOR FILING DATE: 2002-08-15
PRIOR PELICATION NUMBER: US 60/322,947
PRIOR PELING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 48
SOFTWARE: Patcseq for Windows Version 4.0
SEQ ID NO 17
LENGTH: 1770
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|645 TGTTTACAGTTCAACAAGAACTTTGTAATTACCAGCTCAGATGATGAACTGTAAAACTA 1704
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Matches:
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           APPLICANT: Sangel, Olle
TITLE OF INVENTION: HCDC4 MODULATES CYCLIN E
FILE REPERENCE: TSRI 779.2
CURRENT APPLICATION NUMBER: US/10/245,618
CURRENT FILING DATE: 2002-09-16
PRIOR APPLICATION NUMBER: US 60/404,116
PRIOR APPLICATION NUMBER: US 60/404,116
PRIOR APPLICATION NUMBER: US 60/322,947
PRIOR FILING DATE: 2001-09-14
NUMBER OF SEQ ID NOS: 48
SOFTWARE: FASTERQ FOR Windows Version 4.0
SEQ ID NO 5
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ORGANISM: Homo sapien
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LOCATION: (1)
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Patent No. 6087153

GENERAL INFORMATION:
APPLICANT: Greenwald, Iva
APPLICANT: Hubbard, E. Jane
TITLE OF INVENTION: SEL-10 AND USES THEREOF
NUMBER OF SEQUENCES: 7
CORRESPONDENCE ADDRESS:
ADDRESSEE: Cooper & Dunham LLP
STREET: 1185 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036
COMPUTER READABLE FORM:
MEDIUM TYPE: POPPY disk
COMPUTER: BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIN Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/08/899,578
FILING DATE: 24-JUL-1997
CLASSIPICATION NUMBER: 28 678
REGISTRATION NUMBER: 28 678
REGISTRATION NUMBER: 28 678
REFERENCE/DOCKET NUMBER: 0575/53200/JPW/AKC
TELEPHONICATION INFORMATION:
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US-09-092-508-15
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US-08-66-715-17
US-09-690-364-10
US-09-690-364-17
US-09-590-344-17
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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    /cgn2_6/prodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/prodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/prodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/prodata/1/ina/BECOMB.seq:*
6: /cgn2_6/prodata/1/ina/PCTUS COMB.seq:*
6: /cgn2_6/prodata/1/ina/PcTUS COMB.seq:*
                         GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-08-911-716-8

US-08-914-999-5

US-09-620-112D-730

US-09-69-4

US-08-646-715-1

US-09-435-115-1

US-09-690-3110-1

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Maximum Match 100%
Listing first 45 summaries
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Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
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TGGAGTACTGTAGATGGTTCACTTCTTCATACACTTCAAGGACATACTTCCACTGTTCGA
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|1621 TGGTTTGGACGAAATATGGTAGCAACGAGTAGTGACGATGGAACTGTCAAATTGTGGGAT
                                                        TrpAspValAsnThrGlyGluMetLeuAsnThrLeuIleHisHisCysGluAlaValLeu
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                               GlnTyrAspGlu-----ArgValilelleThrGlySerSerAspSerThryalArgVal
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APPLICANT: Ryazanov, Alexey G.
APPLICANT: Hait, William N.
APPLICANT: Hait, William N.
APPLICANT: Pavur, Karen S.
TITLE OF INVENTION: ELONGATION FACTOR-2 KINASE (EF-2 KINASE)
TITLE OF INVENTION: AND METHODS OF USE THEREFOR NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: David A. Jackson, Esq. STREET: 411 Hackensack Ave, Continental Plaza, STREET: Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 07601
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
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STATE: New Jersey
COUNTRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              274 GlnTyrAspAspGlnLyslleValSerGlyLeuArgAspAsnThrIleLyslleTrpAsp 293
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Matches:
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Mismatches:
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                             TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) PEATURE:
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520.00
43.85%
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Sest Local Similarity:
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Pred. No.:
                                                                                   NAME/KEY:

LOCATION:

JS-08-899-578-1
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1813 AATGATAAAACTATCAAGGTTTGGGATTTGAAAACT-----TTTCGTTGTAACTAC 1863
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      209 ArgArgGlyTrpGlyGlnTyrLeuPheLysAsnLysProProAspGlyAsnAlaProPro 228
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APPLICANT: TSUJIMOTO, MASAFUMI
APPLICANT: TSUJIMOTO, MASAFUMI
APPLICANT: INOUE, KEIZO
APPLICANT: ARI, HIROYUKI
TITLE OF INVENTION: OXIDIZED PHOPHOLIPID DEGRADING ENZYME
TITLE OF INVENTION: AND GENE THEREOF
NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
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Patent No. 5849557
GENERAL INFORMATION:
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Conservative:
Mismatches:
Indels:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/914,999
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Jackson Esg., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 601-1-078
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-487-5800
                                                                                                                                                                                                                                                                                                                                                                                                                                       Dictyostelium discoideum
                                                                                                                                                          601-1-078
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INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 2237 base pairs
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392.00
41.18%
24.14%
12.92%
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STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
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ORGANISM: Dic
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                                                                                              LeuGlnArgAspPhelleThrAlaLeuProAlaArgGlyLeuAspHisIleAlaGluAsn 159
                                                                                                                     790 TICCAGAGGAGACATAACCACTATA---TCGAATAAGCTIGATATTACAGCCAAAATG 846
                                                                                                                                                                                         847 GTGCTGTCCCAGAGACAACGAGATGAACTAAATCGAGCTATAGCAGATTATCTTCGTTCA 906
                                                                                                                                                                                                                                                                                   LeualaGluargargGlyTrpGlyGlnTyrLeuPheLysAsnLysProProAspGly--- 224
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                                                                                                                                                                                                                                             GlySerSerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeuAsnThr
--CTGGTTACACGTTGGATTCACTTGTGAAAGAATCATTTTCCCCTGCGTGAA
                                 -IleAsnSerTyrLeuLysProMet
                                                              736 AGCCACTTAGTGGCTTATTAATTATAAATCCAGGGTTGCAAAGCTTTTTG-----ATT
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                                                                        2085
140
98
210
165
                               1755 S. Jefferson Davis Highway, Suite 400
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Matches:
Conservative:
Mismatches:
Indels:
 SPIVAK, MCCLELLAND, MAIER
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                                                                                                                                                                                                                     FILING DATE: 03-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 209943/1993
FILING DATE: 03-AUG-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                NAME: Oblon, No. 5849557man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 2292-030
TELECOMMUNICATION INFORMATION:
TELEFAX: (703) 413-3200
TELEKX: 248855 OPAT UR
INPORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 2085 base pairs
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38.83%
22.84%
12.05%
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EDNESS: unknown
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ORGANISM: Bos taurus
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844..2073
 OBLON, SP
NEUSTADT,
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                                                Arlington
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Best Local Similarity:
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TOPOLOGY: unk
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Pred. No.:
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US-08-283-917-8
                                               CITY: Arl
STATE: Vi
COUNTRY:
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LENGTH: 2085 base pairs TYPE: nucleic acid TYRANDEDNESS: unknown TOPOLOGY: unknown MOLECULE TYPE: CDNA CRIGINAL SOURCE: ORGANISM: Bos taurus FEATURE: LOCATION: 8442073 US-08-61-716-8	4.83e-32 Leng 365.50 Matc 38.83\$ Cons .y: 22.84\$ Mism 12.05\$ Inde 2 Gaps	ON TOTAL TREES (1-88) X OS-08-901-718-8 (1-2085) QY 20 GludrgGludspCysAsndsnGlyGluDroProArgLysllelleProGluLysAsnSer 39 463 GAGGGGCTGTT (1)	Oy 57 ValCysLeuAlaSerThrAlaMetLysThrGluAsnCysValAlaLysThrLysLeuAla 76	628 AACGCAGTGCCTGCCTTA	Oy 117 ValGluHisLeuIleSerGlnMetCysHisTyrGlnHisGlyHis		Oy 163TyrLeuAspAlaLysSerLeuCysAlaAlaGlu	186 GlyMetLeuTrpLysLysLeuIleGluArgMetValArgThrAspSerLeuTrpArgGly 181
Oy 439 ArgAspArg	2y 477 ArgPheAspAsnLysArgIleValSerGlyAlaTyrAspGlyLysIleLysVal 494 1876 CTGTTCCATTCTGGGGGAAGTTTATTTTGAGTTGGGTGATGACAAGACCCTGCGGGTG 1935 2y 495 TrpAspLeuValAlaAlaLeuAspPrOArgAlaProAlaGlyThrLeuCysLeuArgThr 514	2y 515 LeuvalGluHisSerGlyArgValPheArgLeuGlnPheAspGluPheGlnIle 532	961-716-8 ence 8, Apr nt No. 5880 ERAL INFORN PPLICANT:	: TSUJIMO: : INOUE, E : ARAI, HJ INVENTION: INVENTION: SEQUENCES	ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & ADDRESSEE: NEUSTATT, P.C. STREET: 1755 S. Jefferson Davis Highway, Suite 400 CITY: Arlington CITY: Virginia COUNTRY: U.S.A.	COMPUTER READABLE FORM:	CLASSIFICATION: PRIOR APPLICATION DATA: APPLICATION NUMBER: US 08/283,917 FILING DATE: 03-AUG-1994 APPLICATION NUMBER: JP 209943/1993 FILING DATE: 03-AUG-11993 ATTORNEY/AGENT INFORMATION: NAME: OBLON, NO. S880272man F.	

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US-09-601-168B-2 (1-569) x US-08-914-999-5 (1-3465)
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NAME: Jackson Esq. David A.
REGISTRATION NUMBER: 26,742
REPERENCE/DOCKET NUMBER: 601-1-078
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-347-5800
TELEPRAX: 201-343-1684
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 3465 base pairs
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US-08-914-999-5
; Sequence 5, Application US/08914999
; Patent No. 6346406
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50.00%
30.15%
11.11%
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STRANDEDNESS: double
                                                                                                                                                                                                                                   CITY: Hackensack
STATE: New Jersey
COUNTRY: USA
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                                                    GENERAL INFORMATION:
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Best Local Similarity:
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Pred. No.:
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                                                                                                                                  265 GluThrSerLysGlyValTyrCysLeuGlnTyrAspAspGlnLysIleValSerGlyLeu
                                                                                                                                                       323 GlySerSerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeuAsnThr
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APPLICANT: Hait, William N.
APPLICANT: Hait, William N.
APPLICANT: Hait, William N.
APPLICANT: Bavur, Karen S.
TITLE OF INVENTION: BLONGATION FACTOR-2 KINASE (EF-2 KINASE)
TITLE OF INVENTION: AND METHODS OF USE THEREFOR NUMBER OF SEQUENCES: 25
CORRESPONDENCE ADDRESS: 35
ADDRESSE: David A. Jackson, Esq.
STREET: 411 Hackensack Ave, Continental Plaza, 4th
STREET: Briote 3465 79 52 103 28 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OFBRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
APPLICATION DATA:
APPLICATION NUMBER: US/08/914,999
FILING DATE: Conservative: Mismatches: Indels:

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Matches:
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US-09-620-312D-730
SEQ ID NO 730
LENGTH: 1909
TYPE: DNA
ORGANISM: Homo sapiens
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GluArgValllelleThrGlySerSerAspSerThrValArgValTrpAspValAsnThr 336
                                                                                GlyGluMetLeuAsnThrLeuIleHis---HisCysGluAlaValLeuHisLeuArgPhe 355
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TITLE OF INVENTION: No. 6569662el Nucleic Acids and
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 784CIP2B
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Patent No. 6569662
APPERAL INDORMATION:
APPLICANT: Tang, Y. Tom
APPLICANT: Liu, Chenghua
APPLICANT: Asundi, Vinod
APPLICANT: Asundi, Vinod
APPLICANT: Asundi, Vinod
APPLICANT: Chenghua
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APPLICANT: Chenghua
APPLICANT: Wehrman, Tom
APPLICANT: Wen, Aidong J.
APPLICANT: Wang, Yonghong
APPLICANT: Zhou, Ping
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PRIOR FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/488,725
PRIOR FILING DATE: 2000-01-21
NUMBER OF SEQ ID NOS: 1105
SOFTWARE: pt_flugenes Version 1:0
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John Tillinghast
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798 CAAGCTG-----CAGTGCGTCGCCACCGCGGGCTCGCACCTCGGAGAGGCCAAGCGACA 851
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193
117
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Mismatches:
Indels:
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Matches:
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                ATTORNEY/AGENT INFORMATION:
NAME: Geman, Richard A
REGISTRATION UNDRER: 36,627
REFERENCE/DOCKET UNDRER: A-576
TELECOMMUNICATION INFORMATION:
TELEFAX: (415) 781-1989
TELEFAX: 910 277299
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 2359 base pairs
TYPE: nucleic acid
STRANDEDNES: double
TOPOLOGY: linear
TOPECULE TYPE: CDNA
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40.95%
23.05%
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    CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
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                                                                                                                                                                                                                    412 IleLysValTrpAsnThrSerThrCysGluPheValArgThrLeuAsnGlyHisLysArg 431
                                                                                                                                                                                                                                                828 GCGGTATTTAGCGTGGACTACAATGATGAACTGGATATCTTGGTGAGCGGCTCTGCAGAC 887
                                                                                                                                                                                                                                                                                                                                                                                          450 AsnThrileArgLeuTrpAspileGluCysGlyAlaCysLeuArgValLeuGluGlyHis 469
                                                                                                                                                                                                                                                                                                                                                                                                                                      888 TTCACTGTGAAAGTATGGGCTTTATCTGCTGGGACATGCCTGAACACACTCACCGGGCAC 947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  470 GluGlu------IleArgPhe 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         498
                                         372 TrpAspMetAlaSerProThrAspIleThrLeuArgArgValLeuValGlyHisArgAla
                                                                                                                              392 AlavalAsnValValAspPheAspAspLysTyrIleValSerAlaSerGlyAspArgThr
                                                                                                                                                                                                                                                                                                GlylleAlaCysLeuGlnTyrArgAspArgLeu-----ValValSerGlySerSerAsp
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                519 SerGlyArgValPhe------ArgLeuGlnPheAspGluPheGlnIleValSer
                                                                                                                                                                          -----GCGGTGAAGTTTGATGAACAAGCTTGTGACAGGCTCCTTTGACAACAC
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APPLICANT: Hoey, Timothy
APPLICANT: Hoey, Timothy
APPLICANT: Tanese, Nacko
APPLICANT: Wang, Edith
APPLICANT: Wang, Edith
APPLICANT: Wanzierl, Robert O.U.
TITLE OF INVENTION: TATA-BINDING PROTEIN ASSOCIATED FACTORS,
NUMBER OF SEQUENCES: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT: 4 Embarcadero Center, Suite 3400
San Francisco
California
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COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
COMPUTER: Floppy disk
COMPUTER: PER C compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/188,582
FILING DATE: 28-JAN-1994
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  -ACTIGIGCA-
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Patent No. 5534410
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Comai, Lucio
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Tjian,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Sar
STATE: Ca
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
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us-09-601-168b-2.rni

APPLICANT: Dynlact, Brian D. APPLICANT: Houpert, Siegfried APPLICANT: Ruppert, Siegfried APPLICANT: Tanese, Naoko APPLICANT: Tanese, Naoko APPLICANT: Tanese, Naoko APPLICANT: Wanaj, Edith APPLICANT: Wahaziell, Robert O.J. ITLE OF INVENTION: TATA-BINDING PROTEIN ASSOCIATED FACTORS, ITLE OF INVENTION: UNCLEIC ACIDS ENCODING TAFS AND METHODS OF USE NUMBER OF SEQUENCES: 36 CORRESPONDENCE ADDRESS: ADDRESSEE: FREHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco STAFF: California COUNTRY: USA ZIP: 94111-4187	COMPUTER READABLE FORM: MIDLIUM TYPE: FLORDY disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 SOFTWARE: Patentin Release #1.0, Version #1.25 CURRINT APPLICATION DATA: PILING DATE: 09-MAY-1996 CLASSIFICATION NUMBER: US/08/646,715 PRICE APPLICATION DATA: APPLICATION NUMBER: US 08/188,582 FILING DATE: 28-JAN-1994 ATTORNEY AGRAT INFORMATION: NAME: OSMAN, REPERBANCE OCCERT WUMBER: 36,627 RESTRENGUE OCCERT WUMBER: 36,627 RESTRENGUE OCCERT WUMBER: A-57650-2/AUT/RAO TELEPRONE (415) 781-1989 TELEPAN: 910,27299	INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS: JEDNGTH: 2359 base pairs TYPE: mucleic acid STRANDEDNESS: double TYPE: mucleic acid STRANDEDNESS: double TOPOLOGY: linear MOLECULE TYPE: CDNA STRANDEDNESS: double STRANDEDNESS: double STRANDEDNESS: double STRANDEDNESS: double SCOATION: 49.2160 MANGKEY: CDS SCOATION: 49.2160 Matches: 121 SCOATION: 30.00 Matches: 121 SCOATION: 30.00 Matches: 121 SCOATION: 30.00 Matches: 121 SCOATION: 30.00 Matches: 10.15 Mismatches: 10.15 Mismatches: 10.15 Mismatches: 10.15 US-09-601-168B-2 (1-569) x US-08-646-715-4 (1-2359)	Oy 107 GINTEDSERGIUSERASP-GINVAIGIUPHEVAIGIUHISLEUIIESERGINMETCYS Db 513 CACTGGACTAAGGCCCAAAGAATTCATTGAGAAGTACAAATGCGA 5 OY 126HISTYRGINHISGIYHISIIEASNSETTYLLEULYSPTO Db 564 TCTCGACGGCTACTAACATAGAGGTTTTTAACCTTCTTTTGCTGTCTAAGCCGAGGA 6 OY 139 -MELLEUGINAEGASPHEIIETHEALELUPFO
1086 AAAGCTTAAGGCTCTCAGGGAAGCCAGCAAGCATTAGCCCTCAGCAAGGATCA 266ThrserbysGlyvalTyrCysLeuGl 1140 ACTGCCCTCTGCCGTCTTCTACAGGGTGTTAATTCCCATCAGGGCGTAACCTGTGCCGA 274 NTYASPASpGlnLysIleValSerGlyLeuArgAspAsnThrIleLysIleTr 1200 GATTTCAGAGATTCCACGATGTTGGCTGTGGATTTGGCATTTGGCATTTGGCATTTGGCTGAGGATTTG 292 PASpLysAsnThrLeuGluCysLysArgIleLeuThrGlyHisThrGlySerValLeuCy 1260 GTCATTGAGGCCGGGAAGCTGCGTAGGGTGGAGATTGC 312 sLeuGlnTyrAspGluArgValIleIleThrGlySerSerAspSerThrValArgValTr 11	Db 1306CTTGGGAACTGGACAAGGAATGGGGGATATCAATGTGGGTATGT 1352 Qy 332 pAspValAsnThrGlyGluMetLeuAsnThrLeuIleHisHisCysGluAlaValLeuHi 352 Db 1353 GGATGACCGAAGTGGTGAGGTAACCAGGACTAATGGGTCACCAGGACCGTATACGG 1412 Qy 352 sLeuArgpheAsnAsnGlyMetMetValThrCysGerLysAspArgSerIleAl 370 Db 1413 CTGTGCCTTTGCCCCCGAGATGAACCTGTGCTCTCATGTTCCGAGGACACACATAAG 1472 Qy 370 aValTrpAspMetAlaSerProThrSpIleThrLeuArgArgValLeuValGlyHisAr 390 1473 GCTGTGGTCCTGGTCCTGGTCCTGGTAGTCACCGCGGGCACGT 1523 Cy 390 gAlaAlaValAsnValValAspPheAspAspLysTyrIleValSerAlaSerGl 408 Db 1524 TTACCCGTGGTGGTCGTTGGCCGATGGTCACTGTTTTTTTT	1584 GACAAAACTGCTCGTCGGGATTCCAATCAAGCGTTGCGCGTATTCGTGGG 1643 24 428 YHisDyaArgGlylleAlaCysLeuGlnTyrArgaspArgLeuValValSerGl 446 1644 TCACTTGTCGGACGTGGATTGTGTACAATTCTCCCAATTCCAATTGTGGCCACGG 1703 446 YSerSerAspAsnThrlleArgLeuTrpAsplleGluCysGlyAlaCysLeuArgValLe 466 1704 TCTAGCGATCGCACGGTACGCTGTGGGACACATGCCGGTACGCCTGGT 1763 466 uGluGlyHisGluGluLeuValArgCysIleArgPheAspAsnLysArglleVa 484 27 466 uGluGlyHisGluGluLeuValArgCysIleArgPheAspAsnLysArglleVa 484 28 468 GACGGCACAAGGATCGTAGTTCTTCTGGCTTTCTCCGCTGCGGCCGGTATCTGGC 1823 484 ISerGlyAlaTyrAspGlyLysIleLysValTrpAspLeuValAlaAlaLeuAspProAr 504 1824 CTCGGGTTCAGTAGATCAATTCATCATCTGGGATCTG	y 524 gLeudInPheAspGluPheGinIleValSerSerRisAspAspThrIleLe 542 :::

TGRANCAGGAGAAACTTCTAGAAATCAAGGCTCATGAGGATGAAGTGCTTTGTTGTG IIITYASDASDILLYSII = ValSerGlyLeuargaspasnThrIteLysII = I APACLYGAGAGAACAGATTTAAGCAACTGCTCAGTGGAATTTGTAATTG SLEUGINTYASGGIAACTATAAACAACTGCTCAGTGGAATTTGTAATTG SLEUGINTYASGGIAACTAGATACACCTGCTCAGTGGAATTTGTAATTG SLEUGINTYASGGIAACTAGATACACCTGCTCAGTGGAATTTGTAATTG SLEUGINTYASGGIAACTAGATACACCTGCTCAGTGGAATTTGTATTGTAT	452 eArgleuTrpAspileGluCysGlyAlaCysLeuArgValLeuGluGlyHisGluGluLe 472 1
6	2 2 2 2
Percent Similarity: 33.7% Conservative: 102	y 244 uThrileGluSerAsnTrpArgCysGlyArgHisSerLeuGlnArgIleHisCysArgSe 264 :

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-----Trigraparagreferring 1816
                                                                                                 2284 TAAGCTGCAGGCCAAGCAGGAGGTCGATAATGGAATGCTTTACCTGGAATGGATAAACAA 2343
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2 AspProAlaGluAlaValLeuGlnGluLysAlaLeuLysPheMetAsnSerSerGluArg 21
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                                                                                                                                                                                                                     GlnThrTyrAsnSerCysAlaArgLeuCysLeuAsnGlnGlu-ThrValCysLeuAlaSe
                                                                                                                                                                                                                                                                                                 61 rThrAlaMetLysThrGluAsnCysValAlaLysThrLysLeuAlaAsnGlyThrSerSe
                                                                                                                                                                                                                                                                                                                                    1997 AACTTT-CTGGCCTATCAC------
                                                                                                                                                                                                                                                                                                                                                                                                                                              101 sValLysTyrPheGlu---GlnTrpSerGluSerAspGlnValGluPheVal-----Gl
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                                   1769 GAAGAAGTTGAAGACATACTGCAGGAG----
                                                                          GluAspCysAsnAsnGlyGluProProArg
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                   491 sileLysValTrpAspLeuValAlaAlaLeuAspProArgAlaProAlaGlyThrLeuCy 511
                                                                                            511 sLeuArgThrLeuValGluHisSerGlyArgValPheArg-----LeuGlnPheAspGl
                                                                                                                                                                                         3706 TACCAAGTTTTCATCTACCTCTGCTGACAAGACTGCAAAGATCTGGAGTTTT 3757
                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Henzel, William J.
TITLE OF INVENTION: APAF-1, AN ACTIVATOR OF C ASPASE-3
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merchant, Gould, Smith, Edell, Welter & Schmidt
STREET: 3100 No. 6346607west Center, 90 South Seventh St
                                                                                                                                                                  529 uPheGlnIleValSerSerHisAspAspThrIleLeuIleTrpAspPhe
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Matches:
Conservative:
Mismatches:
Indels:
                                              US-09-601-168B-2 (1-569) x US-09-435-115-1 (1-7042)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Fartis Course Version 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/435,115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/055,258
FILING DATE: 07-AUG-1997
ATTORNEY/AGENT INFORMATION:
NAME: Kettelberger, Ph.D., Denise M
REGISTRATION NUMBER: 33,924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11669.6USU1
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CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/092,508
                                                                                                                                                                                                                                                                        Sequence 1, Application US/09435115
Patent No. 6346607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: Coding Sequence
LOCATION: 578...4159
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 7042 base pairs
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OPERATING SYSTEM: DOS
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33.77%
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STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 55402
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                              Minneapolis
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292 pAspLysAsnThrLeuGluCysLysArgIleLeuThrGlyHisThrGlySerValLeuCy 312

Db 3650AAAGACTTTGTCTGTCACCAGGGTACAGTACTTTCTTGTGACATTTCTCACGATGC Qy 529 uPheGlnIleValSerSerSerSerPASPThrIleLeuIleTrpAspPhe 546 :::	US-09-098-310-1 ; Sequence 1, Application US/09098310 ; Patent No. 6403765 ; GENERAL INFORMATION: ; APPLICANT, Alnemi, Emad S.	; TITLE OF INVENTION: TRUNCATED APAF-1 AND METHODS OF USE; TITLE OF INVENTION: THEREFOR; FILE REPERBNCE: 480140.438 ; CURRENT APPLICATION NUMBER: US/09/098,310	; NUMBER OF SEC ID NOS: 15; SOFTWARE: FastSEQ for Windows Version 3.0; SEQ ID NO 1; SEQ ID NO 1; LEWINGHH; 7042	; OKGANISM: Homo sapien ; FEATURE: ; NAME/KEY: CDS ; LOCATION: (578) (4159) frs-09-310-1	ignment Scores: ed. No.: 1.59e-23 Length:	ore: 299.50 Matches: 1 strong Similarity: 33.77% Conservative: 1 str Local Similarity: 20.32% Mismatches: 3 ery Match: Indels: 3	US-09-601-168B-2 (1-569) x US-09-098-310-1 (1-7042)	Qy 2 AspProAlaGluAlaValLeuGlnGluLysAlaLeuLysPheMetAsnSerSerGluArg 21 :::	Qy 22 GluAspCysAsnAsnGlyGluProProArgLysIle 33 [34 IleProGluLysAsnSerLeuArg	Db 1817 CTTACAGAGAAGTACCAGCCAGCTTCAGGATCTACATAAGAAGATAATCACTCAGTTT 193 ON 42 Gluthrtvaagasactosalaarotentvalendaagatcagtenalase 61	1937 CAGAGATATCACCAGCCGCATACTCTTTCACCAGATCAGGAAGACTGTATGGTATTGGTAC	Qy 61 rThralaMetLysThrGluAsnCysValAlaLysThrLysLeuAlaAsnGlyThrSerSe :: :: Db 1997 AACTTT-CTGGCCTATCAC	Qy 81 rMetileValProLysGlnArgLysLeuSerAlaSerTyrGluLysGluLysGluLeuCy	Oy 101 sValLysTyrPheGluGlnTrpSerGluSerAspGlnValGluPheValGl	Qy 118 uHisLeuIleSerGlnMetCysHisTyrGlnHisGlyHisIleAsnSerTyrLeuLysPr :::	Oy 138 OMEtLeuGlnArgAspPhelleThxAlaLeuProAlaArgGlyLeuAspHisIleAlaGl ::::: Db 2140 ACTAGATGAAAAGGATTGTGCA
*	328 rValArgValTrpAspValAsnThrGlyGluMetLeuAsnThrLeulleHisHisCysGl 348 :::::::::	TTCAGTCAATCACTGCAGATTTTCACCAGATGATAAGCTTTTGGCTAGTTGTTCAGCTGA 28 PARGSerlleAlaValTrpAspMetAlaSerProThrAsp1leThrLeuAr 38	2836 TGGAACCTTAAAGCTTTGGGATGCGACATCAGCAAATGAGAGGAAAAGCATTAATGTGAA 2895 383 g	38 TTTTGTG 30	388	395 lValaspPheAspaspLysTyrIleValSerAlaSerGlyAspArgThrIleLy 413	SVAITTPASMITH:	wood four	3196 TGTTGTGTTTCAAGAAAATGAAGTGATGGTCCTTGCAGTTGACCAIATAAGACGTCTGCA 3255 418SerThrCy 420	3256 ACTCATTAATGGAAGAACAGGTCAGATTGATTATCTGACTGA		422 eValArgThrLeuAsnGly	aCysLeuGlnTyrArgAspArgLeuValValSerGlySerSerAspAsnThrI	452 eArgLeuTrpAspIleGluCysGlyAlaCysLeuArgValLeuGluGlyHisGluGluLe 472 ::::: ::: 3496 TCAGGTATGGCAATTGGACAAARGTACTTTCTACGAGGCCATCAGAAAC 3552	walargCys1leArgPheAspAsnLysArg1leValSerGlyAlaTyrAspGlyLy 4	soldenskartningarichtenanninchanktiotillisteriningarkt sei sllerysValfrpAspLeuValAlaalaLeuAspProArgAlaProAlaGlyThrLeuCy 511 :::	3613 AGIGAAGGTATUGAATATTACTGGAAATAAAGAA

292 pAspLysAsnThrLeuGluCysLysArgIleLeuThrGlyHisThrGlySerValLeuCy 312 [1::	348 UALAVAILEUHisLEUARGPheASDASDGIYMELMETVAIThrCysSerLysAs 366 ::::	TTCGTGGTCTGCTGGTGGGGGGGGGGGAAAAATAAAATTTTTTGTG 301 TTCGTGGTCTGCTGGTGGAAGGTAATGGTGGCAGCAAAAAATAAAAATTTTTTTGTG 301 TTCGTGGTCTCCTGGTGGAAGGTGGCTGATTGCAGAGGACATTTAAGTTGGGTTCTTGTG 307 TATCGTGGATCTCCACGTTCAAAGGTGGCTGATTGCAGAGACATTTAAGTTGGGTTCATGG 307 IVALASPPheASPASPLYSTYTILeVALSETALASETGATGGTTCTTGG 307 TGTGATGTTTTCTCCCTGATGGATCATTTTTGACATCTTCTGATGACCAGACAATCAG 313	413 8ValTrpAsnThr	422 eValArgThrLeuasnGly
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1 8 3 3 1	1877 CTTACAGAGAATTGCAGCCAGCTTCAGGATCTACATAAGAAGATAATCACTCAGTTT 1936 42 GlnThrTyrAsnSerCysAlaArgleuCysLeuAsnGlnGlu-ThrValCysLeuAlase 61	29 101 sValLysTyrPheGluGlnTrpSerGluSerAspGlnValGluPheValGl 118 29 101 sValLysTyrPheGluGlnTrpSerGluSerAspGlnValGluPheValGl 118 2047 TGCTTTAATGTTTTCCCTGGATTAAGCAAAAACAGAACTTGTAGGCCCTGC 2103 29 118 uHisLeuIleSerGlnMetCysHisTyrGlnHisGlyHisIleAsnSerTyrLeuLysPr 138 204 TCATCTGATTCATGGAATTTGTGGAATACAGACAT	158 UASHIELEUSETTYTEUASPAlaLys	204 gGlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPheLysAshLysProProAspGl 224 2398

TTCTGTGATGGAATGGAAGTCGTTTCGTTATTATTTACATGATCTTCAAGTAGATTTT IleProgluLysAsnSexLeuArg	42 GINThrTyrAsnSerCysAlaArgleuCysLeuAsnGinGlu-ThrVallysLeuAlaSe 61	rMetileValProLysGlnArgLysLeuSerAlaSerTyrGluLysGluLysGluLeuCy 101	118 UHISLEUIIESERGINMELCYSHISTYRGINHISGIYHISILEASUSERTYLEULYSPY 138 118 UHISLEUIIESERGINMELCYSHISTYRGINHISGIYHISILEASUSERTYLEULYSPY 138 2137 TCATCTGATTCATGAATTTGTGGAATACAGACAT	UASDILELEUSETTYILEUASPAlaLys	TAAGATCACAGATCTTTCCGCTTAGTCGCCCCCCCACACACA	gGlyLeuAlaGluArgArgGlyTrpGlyGlnTyrLeuPheLysAsnLysProProAspGl	244 UINTITEGLUBERASSIITPARGUSGUTARGHISPARLEUGLIEHTBCVSARGUSGE 264 2461 GAGAATAGCTTCTTGTGGAGCTGATAAAACCTTACAGGTGTTCAAAGC 2508 264 rGluThrSerLys	292 pAspLysAsnThrLeuGluCysLysArgIleLeuThrGlyHisThrGlySerValLeuCy 312
90 V 90	6 6 6 6	\dagger \text{8 \dagger \text{6}}	3 & B & E	3 6 8 6	3 6 6 6	6	8 8 8 8 8	8 8
QY 511 SLeuArgThrLeuValGluHisSerGlyArgValPheArgLeuGlnPheAspGl 529 Db 3650AAAGACTTTGTGTCGCAGGGTACATTCTTGTGACGTTCTCTCCACGATGC 3705 QY 529 uPheGlnIleValSerSerSerSerSerSerSerSerSerPTTTTCECUITETTASpPhe 546 Db 3706 TACCAGGTTTTCATCTTCTGCTGACGAAAGACTGGAAAGATTTT 3757		Ar. BESE	COUNTIF: USA ZIP: 55402 COMPUTER READABLE FORM: MEDIUM TYPE: Diskette COMPUTER: IBM Compatible OPERATING SYSTEM: DOS SOFTWARE: FastSEQ for Windows Version 2.0 ADPLICATION DATA ADPLICATION DATA ADPLICATION NUMBER 118/04/042 508	48,807	NAME: Kettleerger, 13.924 REGISTRATION NUMBER: 33,924 REPERENCE/DOCKET NUMBER: 11669.6USU1 TELECOMUNICATION INFORMATION: TELEPRONE: 612-332-9081 TELEPAX: 612-332-9081 TELEPAX: 612-332-9081	ACTERISTICS: 75 base pairs 75 base pairs 75 could 75 could 11 con 76 con 77 con 78 con 78 con	. 1.6e-23 Lengt. 299.50 Match ty: 33.77% Conse axity: 20.32% Misma axity: 387% Indel	US-09-601-168B-2 (1-569) x US-09-092-508-15 (1-7075) Qy

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                                                                                                                                                                                                                                                                                   ADDRESSEE: Merchant, Gould, Smith, Edell, Welter & Schmidt
STREET: 3100 No. 6346607west Center, 90 South Seventh St
CITY: Minneapolis
                                                       Sequence 15, Application US/09435115
Patent No. 6346607
GENERAL INFORMATION:
APPLICANT: Henzel, William J.
TITLE OF INVENTION: APAP-1, AN ACTIVATOR OF C ASPASE-3
NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
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Matches:
Conservative:
Mismatches:
Indels:
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CORRADTING SYSTEM: DOS

SOFTWARE: FastSEQ for Windows Version 2.0

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/435,115

FILING DATE:

APPLICATION NUMBER: 09/092,508

FILING DATE:

APPLICATION NUMBER: 60/055,258

FILING DATE:

APPLICATION NUMBER: 07-AUG-1997

ATTORNEY AGENT INFORMATION:

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ATTORNEY AGENT INFORMATION:

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REGISTRATION NUMBER: 33,924
REFERENCE/DOCKET NUMBER: 116
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TELEPHONE: 612-332-5300
TELEFAX: 612-332-9081
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LOCATION: 578...4192
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
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SEQUENCE CHARACTERISTICS:
LENGTH: 7075 base pairs
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STRANDEDNESS: double
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Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                      USA
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RESULT 14
US-09-435-115-15
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                                                                        2809 ITCAGTCAATCACTGCAGATTTTCACCAGATGATAAGCTTTTGGCTAGTTGTTGAGCTGA
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                               328 rValArgValTrpAspValAsnThrGlyGluMetLeuAsnThrLeuIleHisHisCysGl
                                                                                                                                                       348 uAlaValLeuHisLeuArgPhe-----AsnAsnGlyMetMetValThrCysSerLysAs
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1507 TATTTTGTGTCAGGGGCCATGACCGAGTAGCTCGGCTCTGGGCTACAGACCACTATCAG 1566
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                                                                                                                                                                                                                                        LeuThrGlyHisThrGlySerValLeuCysLeuGlnTyr-----AspGluArgValile 320
                                                                                                                                                                                                                                                                                                                                                                                                         341 AsnThrLeuIleHisHisCysGluAlaValLeuHisLeuArgPheAsn-----AsnGly 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      359 MetMetValThrCysSerLysAspArgSerIleAlaValTrp-----AspMetAlaSer 376
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                                                                                                                                                                                              1267 GAATCAGATGTCTTAGAAAGAATCATGGÁTGAGAAAÁCÁGCAAGTGAGTTGAAGÁTT
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                                                                                                                1207 GTAACACCCAAAAAGCTTCGTAGTGTCAAACAAGCATCAGATCTTAGTCTTATAGACAAA
                                                                                                                                                      -AsplysAsnThrLeuGluCysLysArgile
                                                                                                                                                                                                                                                                                                                         321 IleThrGlySerSerAspSerThrValArgValTrpAspValAsnThrGlyGluMetLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                               1447 GTGGGATATAAAGGACÁCAACTATCCAGTÁTGGGACACACAATTTTCTCCATATGGATAT
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Job time : 149 secs
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APPLICANT: Comai, Lucio
APPLICANT: Pynlact, Brian D.
APPLICANT: Hoey, Timothy
APPLICANT: Ruppert, Siegfried
APPLICANT: Ranes, Nacko
APPLICANT: Wang, Edith
APPLICANT: Wang, Edith
APPLICANT: Waltzierl, Robert O.J.
APPLICANT: Waltzierl, Robert O.J.
APPLICANT: Waltzierl, Robert O.J.
APPLICANT: Waltzierl, Nucleuc O.J.
APPLICANT: Waltzierl, Nucleuc ACIDS ENCODING TAFS AND METHODS OF USE
NUMBER OF SEQUENCES: 36
                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
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100
54
143
101
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/188,582
FILING DATE: 28-JAN-1994
CLEASIFICATION: 45
ATTORNEY/AGRAT INFORMATION:
NAME: Osman, Richard A
REGISTRATION NUMBER: A-57650-2/AJT/RAO
TELEFANCE/DOCKET NUMBER: A-57650-2/AJT/RAO
TELEFANCE (415) 781-1989
TELEFAX: (415) 396-3249
TELEFAX: (415) 396-3249
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
FORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
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Matches:
Conservative:
Mismatches:
Indels:
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                                                                                                                                                                                                                                                                                                                                  ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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TYPE: nucleic acid
STRANDEDNESS: double
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